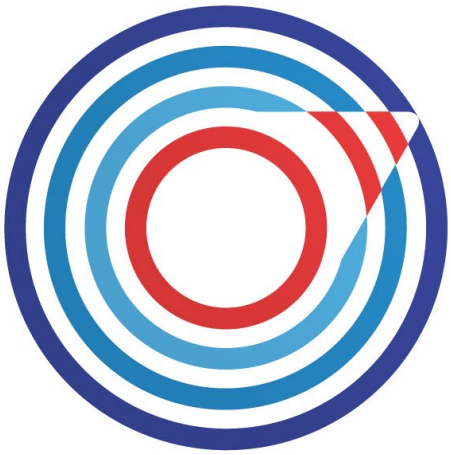
H2020-MSCA-ETN-2018-SAS. Proposal Number 812788



Safer Autonomous Systems

European Training Network on

Safer Autonomous Systems (SAS)

D4.4 – SAS Network-Wide Event I

LAAS-CNRS, Toulouse (FR), 2-5 December 2019

Authors: Stephane Stroobant, Davy Pissoort,
Jeroen Boydens, and Dries Vanoost

This project has received funding from the European Union's
EU Framework Programme for Research and Innovation
Horizon 2020 under Grant Agreement No. 812.788

Table of content

Summary 3

1. Agenda 4

2. Welcome and SAS Progress report (Day 1: 9:30 – 10:30) 6

2.1. Project Flow with key goals and features: 6

2.2. Work packages 7

2.3. Project management (team): key roles and persons in charge 7

2.4. Supervisory Board 7

2.5. SAS ESRs and SAS Supervisory Committees 8

2.6. Researcher Declarations submission and PCDP status 10

2.7. Training and first secondments 10

2.8. Ethics 12

2.9. Communication and Dissemination Outreach 12

2.10. Project Deliverables and Milestones (submitted and upcoming) 16

3. WP parallel sessions (Day 1: 10:30 – 12:00) 16

3.1. Work Package 1 – Designing inherently safe autonomous systems 17

3.2. Work Package 2 – Providing evidence for autonomous systems 18

3.3. Work Package 3 – Providing assurance strategies 19

4. Supervisory Board Meeting (Day 1: 12:00 – 13:00) 21

5. ESR Researchers Council (Day 1: 12:00 – 13:00) 22

6. REA Project Officer presentation: Mid-Term Check (Day 1: 14:00 – 15:00) 23

7. Coordinator's report (Day 1: 15:00 – 15:30) 23

8. Individual ESRs presentations 23

9. Confidential discussions with Project Officer and ESRs (Day 2: 10:15 – 11:30) 24

10. Feedback REA Project Officer (Day 2: 11:45 – 12:45) 24

11. Lab visit, Guest Lecture, Conclusions, and Museum visit (Day 2: 13:45 – 18:00) 24

12. NWE I: Day 3-4 ESRs S/T and soft-skill Trainings 25

13. Photos MSCA ETN SAS Network Wide Event I Toulouse 25

14. Survey SAS NWE I, Dec 2-5 2019, LAAS-CNRS, Toulouse 27

15. Table overview with Annexes + Annexes 28

Summary

Recommendations by the Project Officer regarding the MSCA ETN SAS Mid Term Check – Toulouse 2-3 December 2019, can be found in ***Annex 1***.

Action items:

***All:** follow-up the recommendations by the Project Officer regarding the MSCA ETN SAS Mid Term Check – Toulouse 2-3 December 2019.

***Stephane Stroobant:** update the changes regarding the Deliverables 4.2, 6.2 and 6.6 and report them to the EC.

***Stephane Stroobant:** report all the changes regarding **the SAS Supervisory Committees** to the EC, with respective CVs and reasoning/motivation for these changes.

***Stephane Stroobant:** submit all new received signed first drafts of PCDPs to the EU H2020 Portal via **Deliverable D4.2 PCDP Report**.

***All:** on the SAS website (www.etn-sas.eu) check the contact details and photos regarding the TEAM and CONSORTIUM and confirm/send update to the PM.

***All:** Use all SAS Project Visual Identity tools and EU Funding Acknowledgement regarding MSCA ETN SAS Project related activities

***All ESRs:** Proactively engage in SAS social media activities through the PODIO platform.

***All:** report the postponed due dates of Deliverables and Milestones to the PM with reasoning/motivation and mitigation plan for the delayed delivery dates of the Deliverables and Milestones

***Stephane Stroobant:** report the postponed due dates of Deliverables and Milestones to the EC.

***Orian Dheu (ESR15):** clarify second secondment to Airbus.

***All:** check if ESR's nationalities cause issues for the foreseen secondments, if specific procedures need to be followed, align the secondment timings with the institutions hosting secondments and confirm to the PM.

* **Stephane Stroobant:** report the postponed due dates of the first secondments to the EC.

1. Agenda

The SAS Network-Wide Event I and Mid-Term Review Meeting was held on December 2-5 2019 at LAAS-CNRS in Toulouse, France. With respect to the location: the envisioned location for this NWE I was York as mentioned in Annex I of the SAS Grant Agreement Part B. However, taking into account the Brexit and the uncertainty regarding traveling to the UK and based on the suggestion of the REA Project Officer Nina Poumpalova (Feb 5, 2019), it was decided within the SAS Consortium to hold this SAS NWE I at LAAS-CNRS in Toulouse and to have the SAS NWE II in York.

On Monday December 2nd, the Network-Wide Event was attended by the ESRs, the supervisors and their colleagues, the representatives of the partner organizations and the MST[1] (list of the participants can be found below). The first day started with a detailed introduction regarding the SAS progress report followed by parallel sessions regarding the three scientific work packages where technical aspects and practicalities were discussed and further fine-tuned. In the afternoon we welcomed our Research Executive Agency (REA-Project Officer Nina Poumpalova. After a tour de table during which all SAS Consortium members and ESRs presented themselves, the Project Officer gave a presentation on the monitoring of the SAS project implementation, the SAS reporting and the purpose of the Mid-Term Check. This was followed by the SAS Coordinator's report where the Coordinator presented the SAS Consortium & Mid-Term Progress Report (scientific, training and management). Then, the fellows (ESRs) 1-7 gave a pitch presentation on their background, SAS project, training, outreach, and their future career as a MSCA fellow. The first day was capped by a tasty project dinner at "Les Caves de la Maréchale" in the center of Toulouse.

Tuesday December 3rd started with the ESRs 8-15 pitch presentations which was followed by a confidential discussion between the Project Officer and all ESRs. This was followed by a feedback session given by the Project Officer to all SAS Consortium members + ESRs regarding the further alignment of the SAS Project Implementation. In the afternoon, the *LAAS-CNRS Robotic department* was visited where a demo was given regarding the LAAS-CNRS research topics. A guest lecture on *Uncertainty Theories* given by Didier Dubois was the next agenda item which was followed by a presentation regarding the conclusions of this SAS Project Meeting and the SAS Project next steps. The last part of this second day was dedicated with a visit to the new museum "La Machine" in Toulouse where participants could enjoy admiring futuristic machines and robots.

On day 3 (Wednesday December 4th, 2019), the ESRs attended a scientific/technical training on *Fault Tolerance* given by JC Fabre which was followed by a soft-skill training on *The keys to manage your doctoral project*. The ESRs ended this third day with a laser game social event where they could strengthen their teamwork in an informal environment.

[1] MST: Management Support Team

The last day (Day 4 on Thursday December 5th, 2019) of this NWE I was dedicated to a second scientific/technical training on *Dependable Autonomous Systems* given by Jérémie Guiochet. In the afternoon, the ESRs followed a second soft-skill training on *Anticipate your career path during your PhD* which was followed by a communication strategy evaluation and Intranet (Podio) introduction given by the Project Manager.

The detailed agenda of this SAS Network Wide Event I can be found in ***Annex 2***.

List of SAS NWE I participants (signed versions in ***Annex 3***):

First Name	Last Name	Affiliation
Ahmad	Adee	Bosch - ESR8
Haris	Aftab	University of York - ESR13
Magnus	Albert	SICK AG
Rob	Alexander	University of York
Jeroen	Boydens	KU Leuven
Orian	Dheu	KU Leuven - ESR15
Ehab	el Amam	RH Marine Netherlands BV
Jean-Charles	Fabre	LAAS-CNRS
Raul Sena	Ferreira	LAAS-CNRS - ESR1
Roman	Gansch	Robert Bosch GmbH
Vibhu	Gautam	University of York - ESR11
Jérémie	Guiochet	LAAS-CNRS
Ibrahim	Habli	University of York
Yuan	Liao	Fraunhofer ESK - ESR2
Tianlei	Miao	RH Marine - ESR12
Peter	Munk	Robert Bosch GmbH
Aleksandr	Ovechkin	KU Leuven - ESR5
Davy	Pissoort	KU Leuven

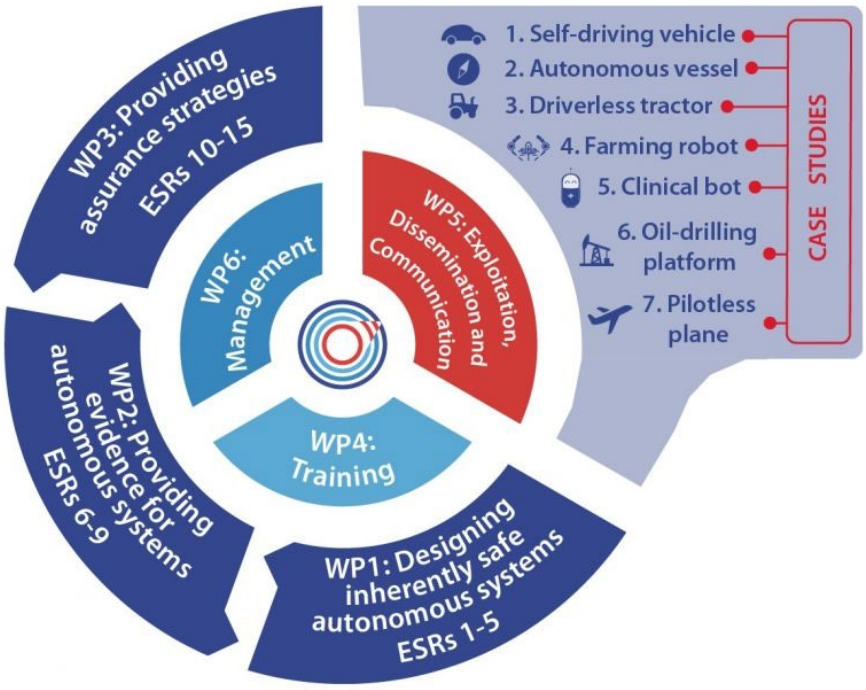
First Name	Last Name	Affiliation
Nina	Poumpalova	EC REA Project Officer
Patrick	Ringeard	Airbus Operations SAS
Alastair	Ruddle	Horiba MIRA Ltd
Luca	Sartori	LAAS-CNRS - ESR6
Stephane	Stroobant	KU Leuven
Zaid	Tahir	University of York - ESR7
Hassan	Tirmizi	KU Leuven - ESR9
Mario	Trapp	Fraunhofer ESK
Dejana	Ugrenovic	KU Leuven - ESR4
Jens	Vankeirsbilck	KU Leuven
Dries	Vanoost	KU Leuven
Marcel	Verhoeven	CNH Industrial
Hélène	Waeselynck	LAAS-CNRS
Fang	Yan	University of York - ESR10
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3

2. Welcome and SAS Progress report (Day 1: 9:30 – 10:30)

The SAS Project Coordinator welcomed all the participants to the SAS Network-Wide Event, followed by a quick Round Table 'Who is who?' of all the participants. After an overview of the 4-days agenda for this SAS Network-Wide Event, the Project Coordinator presented an overall view of the SAS Progress Report, such as the Project Consortium and the Project Governance, with attention to the following aspects and specific actions to be followed. The PPT presentation of this Agenda Item can be found in ***Annex 4***.

2.1. Project Flow with key goals and features:

- S/T programme
- Training programme, including development of soft skills
- Network-wide events
- Active dissemination and outreach



2.2. Work packages

An overview of the 6 Project Work Packages, both scientific and non-scientific, was given. The WP Leader for each WP was confirmed once more at this meeting. The WP Leader is responsible for presenting the overview of the results at the network-wide meetings. An overview of each WP and its WP Leader is given below:

WP	WP Title	WP Leader
1	Designing inherently safe autonomous systems	Mario Trapp (Fraunhofer-IKS)
2	Providing evidence for autonomous systems	Peter Munk (Bosch)
3	Providing assurance strategies	Alastair Ruddle (HORIBA-Mira)
4	Training	Jérémie Guiochet (LAAS-CNRS)
5	Exploitation, Dissemination and Communication	Alastair Ruddle (HORIBA-Mira)
6	Management	Stephane Stroobant (KU Leuven)

2.3. Project management (team): key roles and persons in charge

An overview of the Project Management Team and the persons in charge is given below:

Management Support Team	
Coordinator	Davy Pissoort (KU Leuven)
Vice-Coordinator	Jeroen Boydens (KU Leuven)
Project Manager	Stephane Stroobant (KU Leuven)
Scientific/Technical Coordinator	Dries Vanoost (KU Leuven)
Training Coordinator	Jérémie Guiochet (LAAS-CNRS)
Exploitation & Dissemination Coordinator	Alastair Ruddle (HORIBA-Mira)
KU Leuven R&D Technical Transfer Office	Lukas Lanneau (KU Leuven)
Independent Ombudsperson	Tine Dhaese (KU Leuven)
Independent External Advisor	Paul McGuiness (Science Writer)

2.4. Supervisory Board

See also SAS Project Deliverable 6.6

An overview of the SAS Supervisory Board which consists of 2 Groups is given on the next page.

Group 1 (1 vote per beneficiary):	Group 2 (no formal voting rights):

• D. Pissoort (PC, KU Leuven)
• J. Boydens (VC, KU Leuven)
• D. Vanoost (S/T C, KU Leuven)
• One representative from each Project Beneficiary:
  • P. Valcke (KU Leuven)
  • I. Habli (University of York)
  • J. Guiochet (LAAS-CNRS)
  • M. Trapp (Fraunhofer-ESK)
  • P. Munk (Bosch)
  • A. Ruddle (HORIBA-Mira)
  • E. el Amam (RH Marine)
	• S. Stroobant (PM, KU Leuven)
	• One representative from each Partner Organisation:
	  • P. Liggesmeyer (TU Kaiserlautern)
	  • M. Verhoeven (CNHi)
	  • M. Albert (Sick)
	  • H. Joshi (Jaguar Land Rover)
	  • R. Bridgeman (Lloyd's Register)
	  • E. Landre (Equinor)
	  • C. Seguineau (Naïo)
	  • P. Ringeard (Airbus)
	  • J.H. de Jong (Marin)
	  • E. O'Caroll (PMT)
	• **Luca Sartori** as the ESR representative

CHANGES to Deliverable 6.6:

- **Paul Snauwaert (CNHi) is replaced by Marcel Verhoeven (CNHi) as the representative for CNHi in the SAS Supervisory Board.**
- **Amandine Taillard (Airbus) is replaced by Patrick Ringeard (Airbus) as the representative for Airbus in the SAS Supervisory Board.**
- **Gaetan Severac is replaced by Cédric Seguineau (Naïo) as the representative for Naïo in the SAS Supervisory Board.**
- **Luca Sartori is the ESR representative from the ESRs Researchers Council.**

Action item:
*** Stephane Stroobant:** report the changes regarding **Deliverable 6.6** to the EC.

2.5. SAS ESRs and SAS Supervisory Committees

Amongst the 14 (out of 15) recruited ESRs, there are 8 nationalities; 2 out of 14 are female. The ESR14 position at Horiba-Mira had to be reopened. The starting date for ESR14 is foreseen on January 27th, 2020.

Overall, most of the recruited ESRs are on track regarding the specific research goals they have established in coordination with their supervisors. The fact that ESR14 still has to start has no major consequences on the work of the other 14 ESRs.

The composition of the 15 Supervisory Committees was reviewed and all committees are completed and confirmed at this moment.

An overview of all 15 Supervisory Committees is given on the next page.

[MSCA ETN SAS] EARLY STAGE RESEARCHERS - SUPERVISORY COMMITTEES							
ESR	First Name	Last Name	Affiliation		Current Situation		
					Academic Supervisor 1	Academic Supervisor 2	Industrial Supervisor
1	Raul Sena	Ferreira	LAAS-CNRS		***J. Guiochet***	M. Trapp	H. Joshi
2	Yuan	Liao	Fraunhofer ESK		***M. Trapp***	J.C. Fabre	R. Gansch
3	Joao Vitor	Zacchi	Fraunhofer ESK		***M. Trapp***	I. Habli	R. Gansch
4	Dejana	Ugrenovic	KU Leuven		***J. Boydens***	T. Holvoet	P. Munk
5	Aleksandr	Ovechkin	KU Leuven		***D. Pissoort***	G. Vandenbosch	E. el Amam
6	Luca Vittorio	Sartori	LAAS-CNRS		***H. Waeselynck***	R. Alexander	M. Albert
7	Zaid	Tahir	University of York		***R. Alexander***	H. Waeselynck	D. Ward
8	Ahmad	Adee	Bosch		P. Liggesmeyer	J. Boydens	***P. Munk***
9	Hassan	Tirmizi	KU Leuven		***D. Pissoort***	G. Vandenbosch	A. Rudlle
10	Fang	Yan	University of York		***S. Foster***	J. Guiochet	E. Landre
11	Vibhu	Gautam	University of York		***R. Alexander***	R. Hawkins	R. Gansch
12	Tianlei	Miao	RH Marine		M. Nicholson	P. Slaets	***E. el Amam***
13	Haris	Aftab	University of York		***I. Habli***	J. Guiochet	E. O'Caroll
14	---	---	Horiba-MIRA		U of Coventry?	D. Pissoort	***A. Ruddle***
15	Orian	Dheu	KU Leuven		***P. Valcke***	D. Pissoort	P. Ringeard

Regarding the ETN SAS Grant Agreement, 2 foreseen supervisors left the ETN SAS Consortium for different reasons. Prof. T. Kelly left the University of York and the substitutes for his tasks within the SAS Consortium have been confirmed by the SAS Consortium. Dr. S. Burton switched position and division at Bosch. He was replaced by Dr. R. Gansch who takes over all foreseen tasks of Dr. S. Burton.

Action item:
* **Stephane Stroobant:** report all the changes regarding **the SAS Supervisory Committees** to the EC, with respective CVs and reasoning/motivation for these changes.

2.6. Researcher Declarations submission and PCDP status

All 14 Researcher Declarations for all ESRs already started have been submitted. An overview of the submitted Researchers Declarations is given below:

Researcher Declaration

No	Fellow I ▲	First Name	Last Name	Status	Recruitment Organisation	Start Date	End Date	Working Time Commitment	Duration
1	1	Ahmad	Adee	SUBMITTED	Robert Bosch Gmbh	15-02-2019	14-02-2022	Full Time	36
2	2	Orian	Dheu	SUBMITTED	Katholieke Universiteit Leuven	01-02-2019	31-01-2022	Full Time	36
3	3	Luca	Vittorio Sartori	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
4	4	Raul	Sena Ferreira	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
5	5	Hassan	Tirmizi	SUBMITTED	Katholieke Universiteit Leuven	19-03-2019	18-03-2022	Full Time	36
6	6	Vibhu	Gautam	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
7	7	Zaid	Tahir	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
8	8	Dejana	Ugrenovic	SUBMITTED	Katholieke Universiteit Leuven	10-05-2019	09-05-2022	Full Time	36
9	9	Joao Vitor	Zacchi	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	15-04-2019	14-04-2022	Full Time	36
10	10	Yuan	Liao	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	01-07-2019	30-06-2022	Full Time	36
11	11	Fang	Yan	SUBMITTED	University Of York	18-06-2019	17-06-2022	Full Time	36
12	12	Aleksandr	Ovechkin	SUBMITTED	Katholieke Universiteit Leuven	19-06-2019	18-06-2022	Full Time	36
13	13	Haris	Aftab	SUBMITTED	University Of York	01-07-2019	30-06-2022	Full Time	36
14	14	Tianlei	Miao	SUBMITTED	Rh Marine Netherlands Bv	01-10-2019	30-09-2022	Full Time	36

So far 11 signed PCDPs from the 14 ESRs already started have been submitted to the EU H2020 Participants Portal. The signed PCDPs for ESR7, ESR11 and ESR12 have been sent to the PM. Those 3 PCDPs will be added to the already submitted **Deliverable D4.2 PCDP Report** after approval by the Project Officer.

Action item:
* **Stephane Stroobant:** submit all new received signed first drafts of PCDPs to the EU H2020 Portal via **Deliverable D4.2 PCDP Report**.

2.7. Training and first secondments

An overview of the trainings already followed by the ESRs was given. Furthermore, the ESRs are following research-specific trainings and general (obligatory) trainings organized by their doctoral schools, as well as (international) scientific and soft-skill workshops outside the SAS Project.

At this NWE I the following trainings were scheduled:

- S/T Training: *Fault tolerance* (JC Fabre, LAAS-CNRS)
- S/T Training: *Dependable autonomous robots* (J. Guiochet, LAAS-CNRS)
- Soft-skill Training I: *The keys to manage your doctoral project*
- Soft-skill Training II: *Anticipate your career path during your PhD*

The first secondments for the ESRs were reviewed and discussed. The Project Coordinator explained the schedule, scope, rules and settings of the secondments as they are key items of ETN's. Within the scope of those secondments, the following aspects were highlighted:

- Each secondment period should last at least one month with an advised maximum of 3 months and secondments should be held outside the host institute.

- Each ESR has one secondment in a different country and in a different sector (e.g. university and industry) while focusing on a different perspective and different facilities during those secondments.
- The Actual Secondment Period needs to be submitted at the H2020 Participant Portal (under the Tab 'Researchers') as soon as the Secondment Period has ended, so not sooner!
- Modifications (schedule changes, topic, location) can only be performed after PREVIOUS APPROVAL and on request and should be communicated with the PM who reports this to the PO.

The current status of the first secondments for the ESRs is given in the following table:

[MSCA ETN SAS] EARLY STAGE RESEARCHERS						
ESR	First Name	Last Name	Affiliation	1st Secondment Location	1st Secondment Period	1st Secondment Local Mentor
1	Raul Sena	Ferreira	LAAS-CNRS	Fraunhofer	May - June 2020 (2m)	M. Trapp
2	Yuan	Liao	Fraunhofer ESK	LAAS-CNRS	Jan - Mar 2020 (3m)	J.C. Fabre
3	Joao Vitor	Zacchi	Fraunhofer ESK	University of York	Jan - Mar 2020 (3m)	I. Habli
4	Dejana	Ugrenovic	KU Leuven	LAAS-CNRS	Nov - Dec 2019 (5w)	J. Guiochet
5	Aleksandr	Ovechkin	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
6	Luca Vittorio	Sartori	LAAS-CNRS	Naio	Feb - April 2020 (3m)	G. Severac
7	Zaid	Tahir	University of York	LAAS-CNRS	Feb - April 2020 (3m)	H. Waeselynck
8	Ahmad	Adee	Bosch	TUK	Nov 2019 - Jan 2020 (3m)	P. Liggesmeyer
9	Hassan	Tirmizi	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
10	Fang	Yan	University of York	Equinor	Sep - Nov 2020 (3m)	E. Landre
11	Vibhu	Gautam	University of York	Bosch	April - June 2020 (3m)	R. Gansch
12	Tianlei	Miao	RH Marine	KU Leuven	April - June 2020 (3m)	D. Pissoort
13	Haris	Aftab	University of York	LAAS-CNRS	Oct - Dec 2020 (3m)	J. Guiochet
14	---	---	Horiba-MIRA	KU Leuven	April - June 2020 (3m)	J. Boydens
15	Orian	Dheu	KU Leuven	University of York	April - June 2020 (3m)	R. Alexander

Due do the late start of some ESRs, recruitment delays and program logic, some schedule changes have been discussed for some of the planned secondments. Those changes will be followed up in the coming months by the respective Supervisors, ESRs and secondment hosts representatives and furthermore communicated with the PM who reports this to the PO.

Action item:
* **ALL:** check if ESR's nationalities cause issues for the foreseen secondments, if specific procedures need to be followed, align the secondment timings with the institutions hosting secondments and confirm to the PM.

2.8. Ethics

The European Commission required the SAS Consortium to write a dedicated deliverable on ethical issues and potential dual use related to autonomous systems. This **Deliverable 7.1 GEN – Requirement No.1** has been written through collaboration between KU Leuven and University of York and has been uploaded to the EU H2020 Participant Portal. A voluntary ethical self-assessment by every ESR has been specified and an Ethical Board has been established which consists of the following members:

- KU Leuven: Prof. A. Vedder and Dr. D. Vanoost
- University of York: Dr. I. Habli

2.9. Communication and Dissemination Outreach

SAS Project Visual Identity

To achieve the best dissemination and communication results, the following visual identification and tools need to be used: SAS Project Logo, SAS Project Templates (for PPT, scientific conference presentations, newsletters, project reporting and deliverables. Furthermore, the **EU Funding Acknowledgement is mandatory regarding all MSCA ETN SAS Project related activities**. Examples of these tools are given below.

EU H2020 MSCA-ETN SAS
KICK-OFF MEETING & NWE
JULY 2ND & 3RD 2019

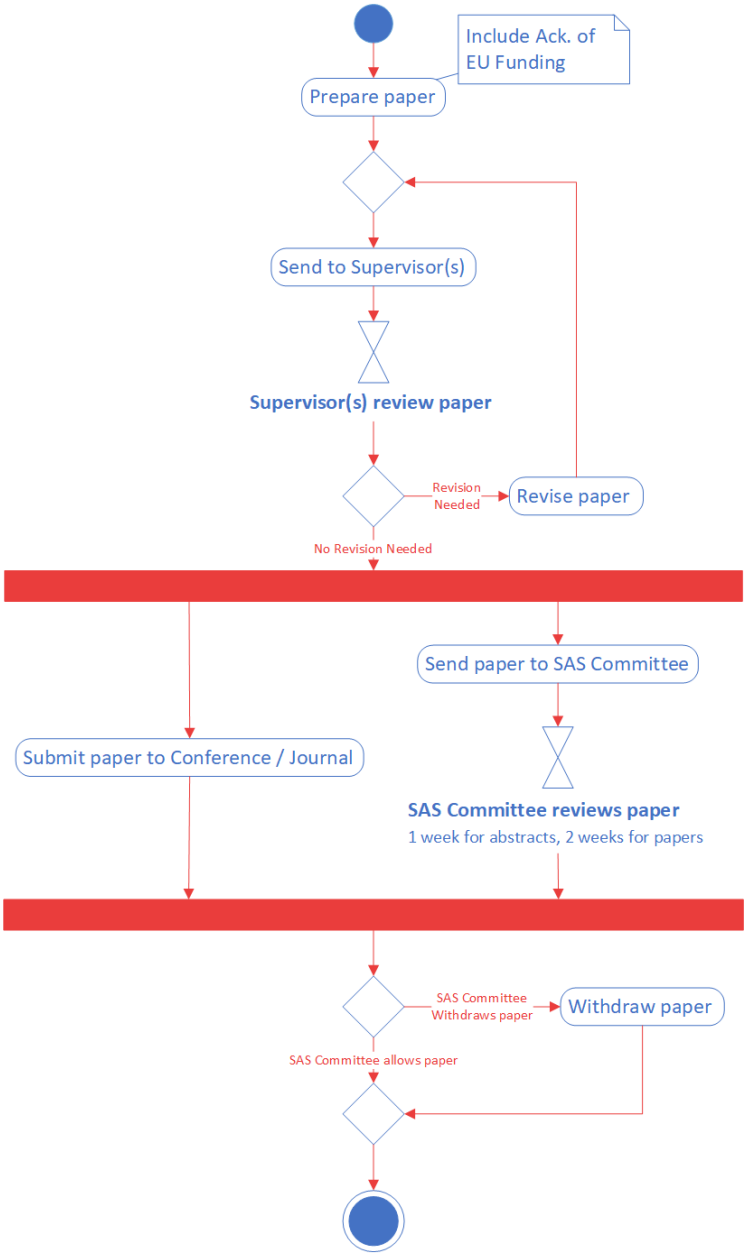
Crowne Plaza, Bruges - BELGIUM

This project has received funding from the European Union's
EU Framework Programme for Research and Innovation
Horizon 2020 under Grant Agreement No. 812.788

Action item:
*** All:** Use all SAS Project Visual Identity tools and EU Funding Acknowledgement regarding MSCA ETN SAS Project related activities.

Post, Paper Pre-submission Procedure, Post Paper Publishing Procedure (OPEN ACCESS) and SAS Papers Archiving System

Special attention was given again to the flowchart of the Paper Pre-submission Procedure. The flowchart of this procedure is given on the following page:



A SAS Papers Archiving System ((http://papers.etn-sas.eu/user/login/) has been set up that is automatically linked with the SAS Project Website. Through this Archiving System, the ESRs are able to upload their peer reviewed papers (both conference and journal papers if applicable) which also allows to update the specific paper through the H2020 Participant Portal.

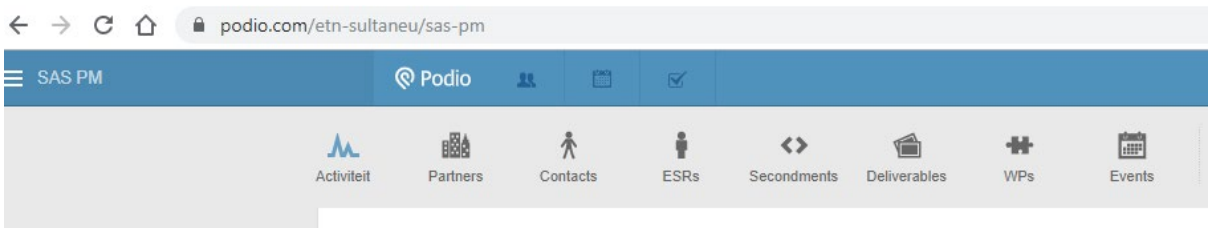
SAS Website

The new SAS-Website is online since September 1st, 2019 (a temporary website was available between June 27th, 2018 and September 1st, 2019).

SAS Blogs, Social Media and Internal Communication (PODIO)

The ESRs are actively involved in communication and dissemination activities. So far, the ESRs have written and published 8 blog posts presenting their work for the general public. Furthermore, the ESRs have published several posts on Social Media (on SAS Facebook, Twitter and LinkedIn channels).

A password-protected Intranet, **PODIO**, has been set up as an internal communication tool between the SAS Management Support Team and all ESRs. This developed Intranet is also a storage space for ESRs' PCDPs, RTDEs, Progress Reports, Deliverables, minutes of WP meetings, NWE reports,…



A special explanation and training/workshop regarding the **SAS Papers Archiving System** and **PODIO** was given to the ESRs on Day 4 of this Network-Wide Event.

SAS Video

A SAS Promo Video will be developed and published during the second year of the SAS Project. This video will explain the project goals and present the team and the collaborating partners. More specifically, this video will be made in collaboration with Storyrunner. They are very acquainted with developing Marie Curie/Best Practice Award Winning Videos in collaboration with KU Leuven.

2.10. Project Deliverables and Milestones (submitted and upcoming)

An overview of the first Project Deliverables and Milestones from the H2020 Participant Portal was given to indicate this workflow and to point out that each beneficiary needs to take responsibility for the Deliverable and Milestone they are the lead for.

Furthermore, project Deliverables and Milestones were discussed during the parallel WP sessions with respect to the feasibility of the scientific and technical deliverables & milestones due to specific ESR recruitment delays and later than foreseen starting dates of ESRs. More information regarding the outcome of these WP parallel sessions can be found under the next section.

3. WP parallel sessions (Day 1: 10:30 – 12:00)

A session for WP parallel discussions for WP1-3 was organized where each appointed WP leader interacted with the ESRs, the Supervisors and the representatives of the Partner Organizations regarding the specific WP and its scientific aspects. The focus in each WP session consisted on the specific tasks, scientific deliverables, milestones and data management plan of each WP. The PPT presentation regarding these WP parallel sessions can be found in ***Annex 5***.

This session was followed by an interactive Q&A session between WPs to clarify some technical aspects and practicalities.

The outcome and summary of those WP sessions can be found on the following pages.

3.1. Work Package 1 – Designing inherently safe autonomous systems

DELIVERABLES WORK PACKAGE 1

No.	Title	Lead	Type	Diss. Level	Due Date
D1.1	Report on first version of the language for the expression of safety constraints and synthesis of safety	CNRS (Raul)	Report	public	M 24 (Oct. 20)
D1.2	Publication on initial implementation of run-time safety contracts and according monitoring architectures	Fraunhofer (João)	Report	public	M 27 (Jan. 21)
D1.3	Publication on the effectiveness of EM-diverse redundancy to harden wireless interconntectivity	KU Leuven (Aleksandr)	Report	public	M 31 (May 21)
D1.4	Report on validation of MAPE-K-based architecture and underlying adaptation concepts in an industrial context	Fraunhofer (Yuan)	Report	public	M 42 (Apr. 22)
D1.5	Report on the practical assessment and evaluation of safety-critical software design and testing strategies	KU Leuven (Dejana)	Report	public	M 42 (Apr. 22)

MILESTONES WORK PACKAGE 1

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS1.1	Different safety assurance frameworks compared on simplified, virtual autonomous system	LAAS (Raul)	Report available	M 13 (Nov. 19)	Dec 2, 2019
MS1.2	Decision on which wireless communication protocols to be considered for study on EMI-aware design techniques and measures **+5 months: rationale > after the secondment of the ESR at University of York**	KU Leuven (Aleksandr)	Overview list available	**M 18 (April 20)** *M 13 (Nov. 19)*	
MS1.3	Initial implementation of run-time safety contracts and according monitoring architectures	Fraunhofer (João)	Report available	M 27 (Jan. 21)	
MS1.4	Software design and testing strategies assessed on testcase of autonomous robot	KU Leuven (Dejana)	Report available	M 36 (Oct. 21)	
MS1.5	Peer-reviewed publication on full implementation of MAPE-K based adaptive platform for autonomous systems	Fraunhofer (Yuan)	Paper accepted for publication in peer-reviewed journal	M 40 (Feb. 22)	

3.2. Work Package 2 – Providing evidence for autonomous systems

DELIVERABLES WORK PACKAGE 2

No.	Title	Lead	Type	Diss. Level	Due Date
D2.1	Report on first experiment of the virtual worlds generation on a robotic simulator **+6 months: rationale > late start of ESR and IP issues with the case study > after the secondment**	LAAS (Luca)	Report	public	**M 19 (May 20)** *M 13 (Nov. 19)*
D2.2	Report on validation of virtual EMI-aware V&V framework on academic testcases	KU Leuven (Hassan)	Report	public	M 31 (May 21)
D2.3	Report discussing the completeness of model-based system analysis when dealing with functional insufficiencies	Bosch (Ahmad)	Report	public	M 31 (May 21)
D2.4	Publication on the situation coverage testing approach applied to a representative automotive case study	University of York (Zaid)	Report	public	M 40 (Feb. 22)

MILESTONES WORK PACKAGE 2

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS2.1	Decision on which model-based system analysis suits are fitted best to cope with functional insufficiencies	Bosch (Ahmad)	Overview on (dis)advantages of the model-based system analysis suits available	M 13 (Nov. 19)	Nov 27, 2019
MS2.2	First experiment of virtual world generation completed for robotic simulator **+6 months: rationale > late start of ESR and IP issues with the case study**	LAAS (Luca)	Report available	**M 19 (May 20)** *M 13 (Nov. 19)*	
MS2.3	Statistical V&V framework for EMI analysis completed	KU Leuven (Hassan)	Simulation framework available	M 22 (Aug. 20)	
MS2.4	Complete prototype tooling for situation coverage testing available and working for a small example	University of York (Zaid)	Description of tools available	M 26 (Dec. 20)	

3.3. Work Package 3 – Providing assurance strategies

DELIVERABLES WORK PACKAGE 3

No.	Title	Lead	Type	Diss. Level	Due Date
D3.1	Literature review of safety challenges associated with the use of intelligent conversational bots **+8 months: rationale > program logic**	University of York (Haris)	Report	public	**M 21 (July 20)** *M 13 (Nov. 19)*
D3.2	Report on executable safety assurance case models for autonomous drilling use-case **+3 months: rationale > depending on secondment timing**	University of York (Fang)	Report	public	**M 27 (Jan 21)** *M 24 (Okt. 20)*
D3.3	Documented assurance case patterns for ML in autonomous vehicles **+4 months: rationale > depends on secondment timing at Horiba-MIRA for ESR11**	University of York (Vibhu)	Report	public	**M 34 (Aug. 21)** *M 30 (Apr. 21)*

No.	Title	Lead	Type	Diss. Level	Due Date
D3.4	Publication on bottlenecks and inconsistencies in the existing liability regimes when applied to autonomous systems and proposed new criteria for liability allocation **+2 months: rationale > program logic**	KU Leuven (Orian)	Report	public	**M 36 (Okt. 21)** *M 34 (Aug. 21)*
D3.5	Report on simulation environment comprising algorithms for optimization, situational awareness and collision avoidance **+12 months: rationale > recruitment delays (RH Marine)**	RH Marine (Tianlei)	Report	public	**M 48 (Okt. 22)** *M 36 (Okt. 21)*
D3.6	Report on pilot demonstration of the common framework for developing wider dependability assurance cases **+8 months: rationale > recruitment delays (Horiba-MIRA)**	Horiba – MIRA (---)	Report	public	**M48 (Okt. 22)** *M 40 (Feb. 22)*

MILESTONES WORK PACKAGE 3

No.	Title	Lead	Means of verific.	Due Date	Delivery Data
MS3.1	Documented set of vehicle use cases for assurance case structures incorporating machine learning **+9 months: rationale > depends on secondment timing at Bosch for ESR11**	University of York (Vibhu)	Report available	**M 21 (July 20)** *M 12 (Okt. 19)*	
MS3.2	Review of relevant techniques from functional safety, cyber security, dependability, etc. **+9 months: rationale > recruitment delays (Horiba-Mira)**	Horiba – MIRA (---)	Overview list available	**M 21 (July 20)** *M 12 (Okt. 19)*	
MS3.3	Bottlenecks and inconsistencies in the existing liability regimes when applied to autonomous systems identified **+10 months: rationale > program logic**	KU Leuven (Orian)	Report available	**M 28 (Feb. 21)** *M 18 (Apr. 20)*	

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS3.4	Safety concept and architectural strategies for clinical conversational bots **+12 months: rationale > program logic**	University of York (Haris)	Report available	**M 37 (Nov. 21)** *M 25 (Nov. 20)*	
MS3.5	Situational and collision avoidance algorithms finalized **+12 months: rationale > recruitment delays (RH Marine)**	RH Marine (Tianlei)	Algorithms implemented and tested	**M 40 (Feb. 22)** *M 28 (Feb. 21)*	
MS3.6	Run-time Assurance Engine using executable structured assurance case meta-models completed **+2 months: rationale > recruitment delays**	University of York (Fang)	Assurance engine available	**M 33 (July 21)** *M 31 (May 21)*	

Action items WP1-3:

* **All:** report the postponed due dates of Deliverables and Milestones to the PM with reasoning/motivation and mitigation plan for the delayed delivery dates of the Deliverables and Milestones.
* **Stephane Stroobant:** report the postponed due dates of Deliverables and Milestones to the EC.

4. Supervisory Board Meeting (Day 1: 12:00 – 13:00)

During this part of the NWE, all SAS Supervisory Board members present, the ESR representative Luca Sartori included, joint together for the **1st Annual SB meeting**, as also foreseen under Milestone 7 of the SAS Project. The Agenda for this Supervisory Board Meeting can be found in ***Annex 6***.

The outcome and minutes of this Supervisory Board Meeting are described below.

Agenda items + outcome:

1. ESR14 Position at Horiba-Mira

- The position was re-opened in September 2019.
- 44 candidates applied of which 22 eligible.
- Recruited candidate (Spain) who applied for a PhD at University of Coventry.
- Start date of the recruited ESR is foreseen on January 27th, 2020.
- Horiba-Mira will only receive EU Funding for 33 months instead of initially 36 months.

2. ESR7 Zaid Tahir

- Zaid was not awarded the required ATAS certificate to pursue a PhD in the UK after 2 applications.
- Furthermore, his ATAS review appeal was also rejected.
- However, Zaid was awarded his work permit and VISA allowing him to be a research associate at the University of York.
- Zaid will receive training as foreseen in the SAS Project Proposal.

3. Secondments: any known issues?

- Airbus -> Advice for Orian (ESR15) to get urgently in touch with Airbus to clarify on a possible secondment there. Consider LAAS-CNRS as a possible alternative.
- Secondments in the UK: not applying as a visiting student but as a visiting researcher.

4. Paper author list + Paper Presubmission Procedure

- The flowchart of the paper presubmission procedure was reviewed and approved.
- Rules regarding the author list: ensure that the main supervisors of the ESRs are mentioned on the respective paper. Supervisory Committee should be informed.

5. ESRs Payments: no known issues

6. Ethics Deliverable:

- Ethics assessment for each ESR is recommended.
- No specific ethical aspects on how the respective research gets into dual use.

7. NWE 2 and 3:

- **SAS NWE 2 in York (UK) @ Department of Computer** is scheduled from June 29 to July 3, 2020.
- **SAS NWE 3 in Munich (GE) @ Fraunhofer** is scheduled from November 17 to 20, 2020.

8. Video:

- SAS Video will be developed in collaboration with Storyrunner.
- Proposal as video material to film an autonomous tractor from CNHi, Zedelgem (BE).

9. Any other Business:

- Luca, the ESR representative, pointed out that 1 ESR did not well-process received feedback and therefore could not positively accept the received critics. SAS Consortium advised to organize a soft-skill training regarding handling with feedback and criticism between supervisor and ESR.
- Peter (Bosch) is a big fan of stickers. Promo material regarding the SAS Project could add extra project visual identity and will be investigated furthermore.

5. ESR Researchers Council (Day 1: 12:00 – 13:00)

The ESRs present at the NWE were able to discuss project-related topics between the ESRs in order to facilitate interaction between them during this first ESR Researchers Council. They were able to share experiences in their research, as well as discuss regarding training, communication, and project management.

A president (Aleksandr Ovechkin) and secretary (Ahmad Adee) were appointed to moderate this ESR Researchers Council and to prepare a short report as a basis for communicating to the Supervisory Board.

The report of this first ESR Researcher Council can be found in ***Annex 7***.

6. REA Project Officer presentation: Mid-Term Check (Day 1: 14:00 – 15:00)

After the lunch break on Day 1, the SAS Consortium + ESRs welcomed the REA Project Officer Nina Poumpalova. After a quick tour de table where each SAS Consortium member and ESR presented themselves to the REA Project Officer, the Project Officer gave a presentation on the monitoring of the SAS project implementation, the SAS reporting and the purpose of the Mid-Term Check. This PPT presentation can be found in ***Annex 8*** (PO_Nina_Mid-term-Check_presentation SAS).

7. Coordinator's report (Day 1: 15:00 – 15:30)

In this session, the Coordinator presented the SAS Consortium & Mid-Term Progress Report with attention to the following aspects: SAS Consortium, Scientific Objective, General Scientific/Technical Progress, Training, Recruitment, Project Management, Communication and Dissemination, and Deliverables & Milestones. The SAS Progress Report, submitted under **Deliverable 6.3 Progress Report**, was the basis for this Coordinator's report and was furthermore the starting point for the REA Project Officer regarding her feedback with respect to the SAS Mid-Term Review Meeting. The PPT presentation of this Coordinator's report can be found in ***Annex 9*** ([MSCA ETN SAS]_Coordinators_Report).

8. Individual ESRs presentations (Day 1: 15:45 – 17:00 + Day 2: 9:00 – 10:15)

During this part of the NWE, the ESRs presented themselves, their background, their specific ESR position and role within the project, and their scientific progress as fellow within the SAS Project. All presentations were of high quality while bright ideas regarding their outreach contribution and future career as MSCA fellow were highly appreciated. The PPT Template regarding the individual ESRs presentations can be found in ***Annex 10*** ([MSCA ETN SAS]_NWE I_December 2-3_Toulouse_Template_PitchPresentationESR).

9. Confidential discussions with Project Officer and ESRs (Day 2: 10:15 – 11:30)

In this confidential meeting, all SAS ESRs were able to discuss with the REA Project Officer regarding their experiences within the SAS Project in terms of administration, supervision and integration, training, progress, and the impact on their future careers.

10. Feedback REA Project Officer (Day 2: 11:45 – 12:45)

After the confidential discussions between the Project Officer and the SAS ESRs, all SAS Consortium members and ESRs joint together for the final session regarding the SAS Mid-Term Progress Report. In this session, the REA Project Officer Nina Poumpalova gave her feedback on the output of the SAS Project so far, on possible training areas for future exploitation, and on the impact on fellows' future careers development. The recommendations from the Project Officer following the Mid-Term Progress Report have been sent via the **H2020 Participants Portal Communication Tab**. Further actions regarding these recommendations will be followed up by the SAS Management Support Team and carried out towards the SAS Consortium in order to further align the SAS Project implementation. Those recommendations can be found in ***Annex 1***.

11. Lab visit, Guest Lecture, Conclusions, and Museum visit (Day 2: 13:45 – 18:00)

On day 2, the afternoon started with a visit to the *LAAS-CNRS Robotic department* where a demo was given regarding the LAAS-CNRS research tendencies. A guest lecture on *Uncertainty Theories* given by Didier Dubois was the next agenda item which was followed by a presentation regarding the conclusions of this SAS Project Meeting and the SAS Project next steps. This PPT presentation can be found in ***Annex 11*** ([MSCA ETN SAS]_NWE I_Conclusions of the meeting + next steps).

The last part of this second day was dedicated with a visit to the new museum "La Machine" in Toulouse where participants could enjoy admiring futuristic machines and robots.

12. NWE I: Day 3-4 ESRs S/T and soft-skill Trainings

The final two days of this Network Wide Event consist of technical and soft-skill trainings for the ESRs. On day 3 (Wednesday December 4th, 2019), the ESRs attended a scientific/technical training on *Fault Tolerance* given by JC Fabre which was followed by a soft-skill training on *The keys to manage your doctoral project*. The ESRs ended this third day with a laser game social event where they could strengthen their teamwork in an informal environment.

The last day (Day 4 on Thursday December 5th, 2019) of this NWE I was dedicated to a second scientific/technical training on *Dependable Autonomous Systems* given by Jérémie Guiochet. In the afternoon, the ESRs followed a second soft-skill training on *Anticipate your career path during your PhD* which was followed by a communication strategy evaluation and Intranet (PODIO) introduction given by the Project Manager.

13. Photos MSCA ETN SAS Network Wide Event I Toulouse

Group picture SAS Consortium + ESRs + Project Officer

Photos SAS NWE 1 Toulouse Day 1-2 (December 2-3, 2019, LAAS-CNRS)

Photos SAS NWE 1 Toulouse Day 3-4 (December 4-5, 2019, LAAS-CNRS)

14. Survey SAS NWE I, Dec 2-5 2019, LAAS-CNRS, Toulouse

After the SAS NWE I, a short online survey has been sent to all the participants to obtain valuable feedback in order to further improve the quality of future network wide events. A part of this survey can be found in ***Annex 12***.

Survey results (20 respondents (out of 32); 1 to 5 scale with 1 = Poor and 5 = Excellent)

Subject	Item	Average
Content	Progress Report Presentation	4.53
	WP Parallel meeting	4.47
	ESR Pitch Presentations	4.63
Venue	Lunches and Coffee Breaks	4.51
	Project Dinner	5
Social Program	LAAS-CNRS Robotic department visit and demo	4.6
	Museum visit "La Machine"	4.65
	Guest Lecture "Uncertainty Theories: a Unified View"	4.05
	ESR Laser Game	5
ESR Trainings (8 respondents (out of 12))	"Fault Tolerance" by prof. Fabre	5
	"The keys to manage your doctoral project"	4.88
	"Dependable Autonomous Robots" by prof. Guiochet	5
	"Anticipate your career path during your PhD"	4.88
	"Communication strategy evaluation and Intranet introduction" by PM, CM and S/T Coordinator	4.88
General	Overall rating	4.72

Survey comments:

- Although they were really stressed, the ESRs really presented well.
- Excellent organization!
- Although PO gave comments on progress report, a lot of effort is already put in it to give a good overview of what we already accomplished in this project.
- The work parallel session was not organised well, was not constructive.
- Need scope/architecture discussion of the whole WP.
- Nice to see the department as well, Social event highly appreciated.
- The museum was a real surprise!!
- Coffee breaks, lunches and project dinner very good!
- The courses and activities are all fantastic and practical.

15. Table overview with Annexes + Annexes

Annex 1	Recommendations Mid Term Check by the PO
Annex 2	Detailed Agenda SAS NWE I Dec 2-5, 2019
Annex 3	List of SAS NWE I participants – signed versions
Annex 4	PPT Presentation “Welcome and SAS Progress Report”
Annex 5	PPT Presentation “WP parallel sessions”
Annex 6	Agenda Supervisory Board Meeting NWE I Dec 2, 2019
Annex 7	Report ESR Researcher Council NWE I Dec 2, 2019
Annex 8	PPT Presentation “SAS Mid Term Check_ Project Officer”
Annex 9	PPT Presentation “Coordinator’s report”
Annex 10	PPT Template “ESR Pitch Presentation”
Annex 11	PPT Presentation “Conclusions of the meeting + next steps”
Annex 12	SAS NWE I Survey form

Annex 1
Recommendations Mid Term Check by the PO

Ref. Ares(2020)910655 - 12/02/2020

EUROPEAN COMMISSION
RESEARCH EXECUTIVE AGENCY

Unit A1
Marie Skłodowska-Curie – Innovative Training Networks

To the Primary Coordinator Contact in charge

Subject: H2020-MSCA-ITN-2018
Grant Agreement 812788- SAS

Recommendations – Mid Term check – Toulouse 2-3 December 2019

Dear Sir,

I am writing in connection with the above-mentioned grant.

Please find enclosed the recommendations following the mid term check in Toulouse last 2-3 December 2019 which will need to be reported in the Technical periodic report together with an explanation on their implementation.

Recommendations and Issues for follow up:

The entire consortium has been working very hard towards the achievement of the proposed objectives. The project management is very good, dedicated and committed. The PO congratulated the consortium and encouraged them to keep up the good work. The PO also congratulated the fellows for their hard work and enthusiasm.

The PO reminded the consortium that any deviation from the DoA needed to be discussed beforehand with the PO. The PO requested that the changes in the supervision team were addressed in a letter (CVs of new supervisors) and submitted through the Formal Notification tab.

The PO requested that a mitigation plan for the delayed recruitment of ESR 14 (MIRA LtD) is prepared and submitted also through the Formal Notification tab.

The PO recommended that a Formal Notification is sent by the Coordinator to briefly explain the chain delay in some deliverables due to late recruitment.

The PO requested that the comments in the milestones tab on the portal are also completed.

The PO recommended that the fellows play an active role in the updating of the website by highlighting the innovative aspects of their projects.

The PO reminded the consortium that the fellows are to dedicate 100% of their time to their project.

The PO reminded the consortium that expenses related to visa costs, registration fees, student services, language course needed to be reimbursed from the Institutional Costs BÍ category.

The PO reminded the consortium that assistance to the fellows with regard to their reallocation when on secondment was welcome and that the fees for the housing and travel are to be taken from the Institutional Costs B1 category. The PO proposed to share best practices such as apartment sharing / exchange, etc.

The PO recommended that all fellows follow up on their soft skills: public speaking, PP presentations, talking to the media, proposal writing, management, etc ...

The PO reminded the consortium that the publications in peer-review journals need to be in Open Access.

The PO requested that commitment letters from TUM and University of Toulouse be sent.

The PO recommended that the coordinator requests a re-commitment from the Partners who are unresponsive and to look for alternative solutions in order to implement the secondments as per the DoA.

The PO recommended that the fellows attend the Researchers night in September 2020.

The PO can assist with VISA support letters when deemed necessary.

Please ensure that the other members of your consortium are informed of this letter.

Yours faithfully,

Nina Poumpalova (e-signed)

Project Officer

Annex 2
Detailed Agenda SAS NWE I Dec 2-5, 2019

European Training Network for Safer Autonomous Systems

MSCA ETN SAS Network Wide Event 1
Toulouse, 02-05.12.2019

DETAILED AGENDA

Location: **Toulouse (FR) @ LAAS-CNRS**, 7 Avenue du Colonel Roche, 31031 Toulouse

How to get there: https://www.laas.fr/public/en/how-get-laas

Hotel accommodation link: https://www.laas.fr/public/en/accomodation-short-stay

MONDAY 02.12.2019 – Day 1

ESRs + Supervisors & their colleagues + representatives of the Partner Organizations + Management Support Team + **Project Officer (from 14:00)**

Time	**Meeting room: Salle Europe, LAAS-CNRS**	
9:00 – 9:30	Welcome with coffee and refreshments	
9:30 – 10:30	Progress report	
10:30 – 12:00	WP Parallel Sessions (Coffee Break included) **WP1: Tourmalet - WP2: Vignemale - WP3: Europe**	
12:00 – 13:00	MST/Supervisory Board Meeting	ESR Researchers Council (**Hourgade**)
13:00 – 14:00	*Lunch break*	
14:00 – 14:05	Welcome by REA Project Officer and Project Coordinator	
14:05 – 14:25	Tour de table: Introduction of the beneficiaries and partner organizations, their research team and role within the project	
14:25 – 14:45	REA Project Officer presentation: presentation on the monitoring of project implementation, reporting and purpose of the mid-term check	
14:45 – 15:00	Questions & Answers	
15:00 – 15:30	Coordinator's report: presentation of the Consortium & Mid-term progress report (scientific, training and management)	
15:30 – 15:45	*Short break*	
15:45 – 17:00	Individual ESRs presentations (5 min + 2 min Q&A) - 8 ESRs	
20:00	Official project dinner Toulouse downtown "Les caves de la Maréchale"	

TUESDAY 03.12.2019 – Day 2

ESRs + Supervisors & their colleagues + representatives of the Partner Organizations + Management Support Team **+ Project Officer**

Time	**Meeting room: Salle Europe, LAAS-CNRS**
09:00 – 10:15	Individual ESRs presentations (5 min + 2 min Q&A) - 7 ESRs
10:15 – 11:30	Confidential discussions with PO and all fellows
11:30 – 11:45	*Short break*
11:45 – 12:45	Feed-back and Q&A between Project Coordinator / MST / SAS Partners and Project Officer
12:45 – 13:45	*Lunch break*
13:45 – 14:45	LAAS-CNRS Robotic department visit + demo
15:00 – 16:00	Guest lecture – Didier Dubois (IRIT, France)
16:00 – 16:30	Conclusions of the meeting + project next steps
17:00 – 18:00	Visit of the new museum “La Machine”
18:00	Bus to Toulouse city center

WEDNESDAY 04.12.2019 – Day 3: S/T Training and Soft-skill training

ESRs + Optional: Management Support Team + Supervisors & their colleagues

Time	**Meeting room: Hourgade, LAAS-CNRS**
09:00 – 12:00	S/T Training: Fault tolerance (JC Fabre, LAAS-CNRS)
12:00 – 13:00	*Lunch break*
13:00 – 16:00	Soft-skill Training I: The keys to manage your doctoral project
18:00 – 19:30	ESRs social event organized by ESRs Luca and Raul (Laser game)

THURSDAY 05.12.2019 – Day 4: S/T Training and Soft-skill training

ESRs + Optional: Management Support Team + Supervisors & their colleagues

Time	**Meeting room: Hourgade, LAAS-CNRS**
09:00 – 12:00	S/T Training: Dependable autonomous robots (J. Guiochet, LAAS-CNRS)
12:00 – 13:00	*Lunch break*
13:00 – 16:00	Soft-skill Training II: Anticipate your career path during your PhD
16:00 – 16:30	*Short break*
16:30 – 18:00	Communication strategy evaluation and Intranet (Podio) introduction (PM)

This project has received funding from the European Union’s EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

Annex 3
List of SAS NWE I Participants – signed versions

[MSCA ETN SAS] NWE 1 TOULOUSE MONDAY DECEMBER 2 2019			
First Name	**Last Name**	**Affiliation**	**Signature**
Ahmad	Adee	Bosch - ESR8	
Haris	Aftab	University of York - ESR13	
Magnus	Albert	SICK AG	
Rob	Alexander	University of York	
Natalie	Bertels	KU Leuven	
Jeroen	Boydens	KU Leuven	
Richard	Bridgeman	Lloyd's Register EMEA	
Johan	de Jong	Maritime Research Center Netherlands	
Orian	Dheu	KU Leuven - ESR15	
Ehab	el Amam	RH Marine Netherlands BV	
Ivo	Emanuilov	KU Leuven	
~~Bitzel~~	~~Enrique Cortez Sic~~	~~Horiba MIRA Ltd - ESR14~~	
Jean-Charles	Fabre	LAAS-CNRS	
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Simon	Foster	University of York	
Roman	Gansch	Robert Bosch GmbH	
Vibhu	Gautam	University of York - ESR11	
Jérémie	Guiochet	LAAS-CNRS	
Ibrahim	Habli	University of York	
Richard	Hawkins	University of York	
Harita	Joshi	Jaguar Land Rover	
Ralf	Kirchner	Fraunhofer ESK	
Einar	Landre	Equinor ASA	
Lukas	Lanneau	KU Leuven	
Yuan	Liao	Fraunhofer ESK - ESR2	
Peter	Liggesmeyer	Fraunhofer IESE / TUK	
John	Mcdermid	University of York	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Peter	Munk	Robert Bosch GmbH	
Eoin	O Carroll	Portable Medical Technology Ltd	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Davy	Pissoort	KU Leuven	
Patrick	Ringeard	Airbus Operations SAS	
Alastair	Ruddle	Horiba MIRA Ltd	
Luca	Sartori	LAAS-CNRS - ESR6	
Cédric	Seguineau	Naïo Technologies SAS	
Sanjiv	Sharma	Airbus Operations SAS	
Paul	Snauwaert	Case New Holland Industrial	
Stephane	Stroobant	KU Leuven	
Zaid	Tahir	University of York - ESR7	

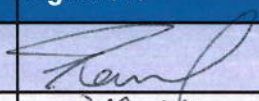
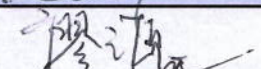
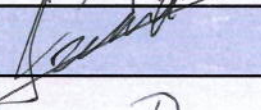
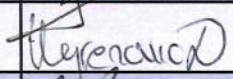
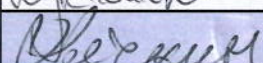
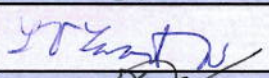
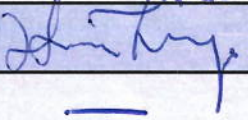
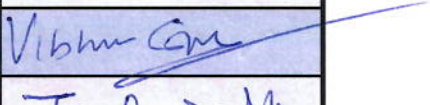
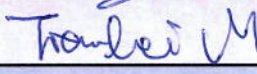
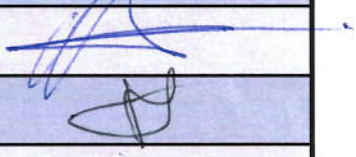
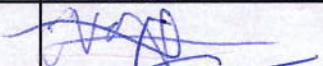
[MSCA ETN SAS] NWE 1 TOULOUSE MONDAY DECEMBER 2 2019			
First Name	**Last Name**	**Affiliation**	**Signature**
Hassan	Tirmizi	KU Leuven - ESR9	
Mario	Trapp	Fraunhofer ESK	
Dejana	Ugrenovic	KU Leuven - ESR4	
Peggy	Valcke	KU Leuven	
Jan-Kees	Van der Ven	RH Marine Netherlands BV	
Dries	Vanoost	KU Leuven	
Marcel	Verhoeven	Case New Holland Industrial	
Hélène	Waeselynck	LAAS-CNRS	
David	Ward	Horiba MIRA Ltd	
Fang	Yan	University of York - ESR10	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Jens	Verbeeck	KU Leuven	
Nina	Poumpalova	REA PO	

[MSCA ETN SAS] NWE 1 TOULOUSE TUESDAY DECEMBER 3 2019			
First Name	**Last Name**	**Affiliation**	**Signature**
Ahmad	Adee	Bosch - ESR8	
Haris	Aftab	University of York - ESR13	
Magnus	Albert	SICK AG	
Rob	Alexander	University of York	
Natalie	Bertels	KU Leuven	
Jeroen	Boydens	KU Leuven	
Richard	Bridgeman	Lloyd's Register EMEA	
Johan	de Jong	Maritime Research Center Netherlands	
Orian	Dheu	KU Leuven - ESR15	
Ehab	el Amam	RH Marine Netherlands BV	
Ivo	Emanuilov	KU Leuven	
~~Bitzel~~	~~Enrique Cortez Sic~~	~~Horiba MIRA Ltd - ESR14~~	
Jean-Charles	Fabre	LAAS-CNRS	
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Simon	Foster	University of York	
Roman	Gansch	Robert Bosch GmbH	
Vibhu	Gautam	University of York - ESR11	
Jérémie	Guiochet	LAAS-CNRS	
Ibrahim	Habli	University of York	
Richard	Hawkins	University of York	
Harita	Joshi	Jaguar Land Rover	
Ralf	Kirchner	Fraunhofer ESK	
Einar	Landre	Equinor ASA	
Lukas	Lanneau	KU Leuven	
Yuan	Liao	Fraunhofer ESK - ESR2	
Peter	Liggesmeyer	Fraunhofer IESE / TUK	
John	Mcdermid	University of York	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Peter	Munk	Robert Bosch GmbH	
Eoin	O Carroll	Portable Medical Technology Ltd	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Davy	Pissoort	KU Leuven	
Patrick	Ringeard	Airbus Operations SAS	
Alastair	Ruddle	Horiba MIRA Ltd	
Luca	Sartori	LAAS-CNRS - ESR6	
Cédric	Seguineau	Naïo Technologies SAS	
Sanjiv	Sharma	Airbus Operations SAS	
Paul	Snauwaert	Case New Holland Industrial	
Stephane	Stroobant	KU Leuven	
Zaid	Tahir	University of York - ESR7	

[MSCA ETN SAS] NWE 1 TOULOUSE TUESDAY DECEMBER 3 2019			
First Name	**Last Name**	**Affiliation**	**Signature**
Hassan	Tirmizi	KU Leuven - ESR9	
Mario	Trapp	Fraunhofer ESK	
Dejana	Ugrenovic	KU Leuven - ESR4	
Peggy	Valcke	KU Leuven	
Jan-Kees	Van der Ven	RH Marine Netherlands BV	
Dries	Vanoost	KU Leuven	
Marcel	Verhoeven	Case New Holland Industrial	
Hélène	Waeselynck	LAAS-CNRS	
David	Ward	Horiba MIRA Ltd	
Fang	Yan	University of York - ESR10	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Jean	Vanheerswijck	KU Leuven	
Nina	Poumpalova	REA EU Project Officer	

[MSCA ETN SAS] NWE 1 TOULOUSE WEDNESDAY DECEMBER 4 2019			
09:00-12:00 S/T Training: Fault Tolerance (JC Fabre, LAAS-CNRS)			
First Name	**Last Name**	**Affiliation**	**Signature**
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Yuan	Liao	Fraunhofer ESK - ESR2	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Dejana	Ugrenovic	KU Leuven - ESR4	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Luca	Sartori	LAAS-CNRS - ESR6	
Zaid	Tahir	University of York - ESR7	
Ahmad	Adee	Bosch - ESR8	
Hassan	Tirmizi	KU Leuven - ESR9	
Fang	Yan	University of York - ESR10	—
Vibhu	Gautam	University of York - ESR11	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Haris	Aftab	University of York - ESR13	—
Orian	Dheu	KU Leuven - ESR15	
Jérémie	Guiochet	LAAS-CNRS	—
Hélène	Waeselynck	LAAS-CNRS	—
Dries	Vanoost	KU Leuven	
Jens	Vankeirsbilck	KU Leuven	
Stephane	Stroobant	KU Leuven	

[MSCA ETN SAS] NWE 1 TOULOUSE WEDNESDAY DECEMBER 4 2019			
13:00-16:00 Soft-skill Training: The keys to manage your doctoral project			
First Name	**Last Name**	**Affiliation**	**Signature**
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Yuan	Liao	Fraunhofer ESK - ESR2	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Dejana	Ugrenovic	KU Leuven - ESR4	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Luca	Sartori	LAAS-CNRS - ESR6	
Zaid	Tahir	University of York - ESR7	
Ahmad	Adee	Bosch - ESR8	
Hassan	Tirmizi	KU Leuven - ESR9	
Fang	Yan	University of York - ESR10	—
Vibhu	Gautam	University of York - ESR11	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Haris	Aftab	University of York - ESR13	—
Orian	Dheu	KU Leuven - ESR15	
Jérémie	Guiochet	LAAS-CNRS	—
Hélène	Waeselynck	LAAS-CNRS	—
Dries	Vanoost	KU Leuven	—
Jens	Vankeirsbilck	KU Leuven	—
Stephane	Stroobant	KU Leuven	—

[MSCA ETN SAS] NWE 1 TOULOUSE THURSDAY DECEMBER 5 2019			
09:00-12:00 S/T Training: Dependable autonomous robots (J. Guiochet, LAAS-CNRS)			
First Name	**Last Name**	**Affiliation**	**Signature**
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Yuan	Liao	Fraunhofer ESK - ESR2	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Dejana	Ugrenovic	KU Leuven - ESR4	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Luca	Sartori	LAAS-CNRS - ESR6	
Zaid	Tahir	University of York - ESR7	
Ahmad	Adee	Bosch - ESR8	
Hassan	Tirmizi	KU Leuven - ESR9	
Fang	Yan	University of York - ESR10	—
Vibhu	Gautam	University of York - ESR11	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Haris	Aftab	University of York - ESR13	—
Orian	Dheu	KU Leuven - ESR15	
Jérémie	Guiochet	LAAS-CNRS	
Hélène	Waeselynck	LAAS-CNRS	—
Dries	Vanoost	KU Leuven	
Jens	Vankeirsbilck	KU Leuven	
Stephane	Stroobant	KU Leuven	

[MSCA ETN SAS] NWE 1 TOULOUSE THURDAY DECEMBER 5 2019			
13:00-16:00 Soft-skill Training: Anticipate your career path during your PhD			
First Name	**Last Name**	**Affiliation**	**Signature**
Raul Sena	Ferreira	LAAS-CNRS - ESR1	
Yuan	Liao	Fraunhofer ESK - ESR2	
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3	
Dejana	Ugrenovic	KU Leuven - ESR4	
Aleksandr	Ovechkin	KU Leuven - ESR5	
Luca	Sartori	LAAS-CNRS - ESR6	
Zaid	Tahir	University of York - ESR7	—
Ahmad	Adee	Bosch - ESR8	
Hassan	Tirmizi	KU Leuven - ESR9	
Fang	Yan	University of York - ESR10	
Vibhu	Gautam	University of York - ESR11	
Tianlei	Miao	RH Marine Netherlands BV - ESR12	
Haris	Aftab	University of York - ESR13	—
Orian	Dheu	KU Leuven - ESR15	
Jérémie	Guiochet	LAAS-CNRS	—
Hélène	Waeselynck	LAAS-CNRS	—
Dries	Vanoost	KU Leuven	—
Jens	Vankeirsbilck	KU Leuven	—
Stephane	Stroobant	KU Leuven	—

Annex 4
PPT Presentation “Welcome and SAS Progress Report”

Safer Autonomous Systems

NETWORK WIDE EVENT 1
TOULOUSE, 2-5 DECEMBER 2019

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

First things first

- Security form LAAS-CNRS; all completed?
- Always keep your ID card with you at LAAS-CNRS
- Coffee breaks and lunch breaks during this Event at LAAS-CNRS will be in the Main Hall
- Further logistic and practical matters: please ask Jérémie
- @Jérémie: other practicalities to mention right now?

Round table

Who is who?

NWE1 meeting (Toulouse, France) AGENDA Day 1 (Mon, 2 December)

ESRs + Supervisors & their colleagues + representatives of the Partner Organizations + Management Support Team + **Project Officer (from 14:00)**

Time	Meeting room: Salle Europe, LAAS-CNRS	
9:00 – 9:30	Welcome with coffee and refreshments	
9:30 – 10:30	Progress report	
10:30 – 12:00	WP Parallel Sessions (Coffee Break included) WP1: Tournalet - WP2: Vignemale - WP3: Europe	
12:00 – 13:00	MST/Supervisory Board Meeting	ESR Researchers Council (Hourgade)
13:00 – 14:00	*Lunch break*	
14:00 – 14:05	Welcome by REA Project Officer and Project Coordinator	
14:05 – 14:25	Tour de table: Introduction of the beneficiaries and partner organizations, their research team and role within the project	
14:25 – 14:45	REA Project Officer presentation: presentation on the monitoring of project implementation, reporting and purpose of the mid-term check	
14:45 – 15:00	Questions & Answers	
15:00 – 15:30	Coordinator's report: presentation of the Consortium & Mid-term progress report (scientific, training and management)	
15:30 – 15:45	*Short break*	
15:45 – 17:00	Individual ESRs presentations (5 min + 2 min Q&A) - 8 ESRs	
20:00	Official project dinner Toulouse downtown "Les caves de la Maréchale"	

NWE1 meeting (Toulouse, France) AGENDA Day 2 (Tue, 3 December)

TUESDAY 03.12.2019 – Day 2
ESRs + Supervisors & their colleagues + representatives of the Partner Organizations + Management Support Team **+ Project Officer**

Time	Meeting room: Salle Europe, LAAS-CNRS
09:00 – 10:15	Individual ESRs presentations (5 min + 2 min Q&A) - 7 ESRs
10:15 – 11:30	Confidential discussions with PO and all fellows
11:30 – 11:45	*Short break*
11:45 – 12:45	Feed-back and Q&A between Project Coordinator / MST / SAS Partners and Project Officer
12:45 – 13:45	*Lunch break*
13:45 – 14:45	LAAS-CNRS Robotic department visit + demo
15:00 – 16:00	Guest lecture – Didier Dubois (IRIT, France)
16:00 – 16:30	Conclusions of the meeting + project next steps
17:00 – 18:00	Visit of the new museum "La Machine"
18:00	Bus to Toulouse city center

NWE1 meeting (Toulouse, France)
AGENDA Day 3-4 (Wed-Thu, 4-5 December)

7

WEDNESDAY 04.12.2019 – Day 3: S/T Training and Soft-skill training
ESRs + Optional: Management Support Team + Supervisors & their colleagues

Time	Meeting room: Hourgade, LAAS-CNRS
09:00 – 12:00	S/T Training: Fault tolerance (JC Fabre, LAAS-CNRS)
12:00 – 13:00	*Lunch break*
13:00 – 16:00	Soft-skill Training I: The keys to manage your doctoral project
18:00 – 19:30	ESRs social event organized by ESRs Luca and Raul (Laser game)

THURSDAY 05.12.2019 – Day 4: S/T Training and Soft-skill training
ESRs + Optional: Management Support Team + Supervisors & their colleagues

Time	Meeting room: Hourgade, LAAS-CNRS
09:00 – 12:00	S/T Training: Dependable autonomous robots (J. Guiochet, LAAS-CNRS)
12:00 – 13:00	*Lunch break*
13:00 – 16:00	Soft-skill Training II: Anticipate your career path during your PhD
16:00 – 16:30	*Short break*
16:30 – 18:00	Communication strategy evaluation and Intranet (Podio) introduction (PM)

SAS NWE1 list of participants

8

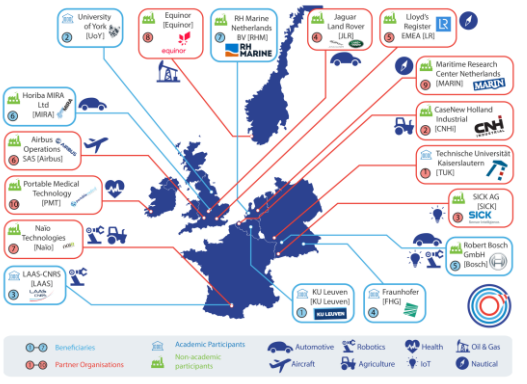
First Name	Last Name	Affiliation
Ahmad	Adee	Bosch - ESR8
Haris	Aftab	University of York - ESR13
Magnus	Albert	SICK AG
Rob	Alexander	University of York
Jeroen	Boydens	KU Leuven
Orian	Dheu	KU Leuven - ESR15
Ehab	el Amam	RH Marine Netherlands BV
Jean-Charles	Fabre	LAAS-CNRS
Raul Sena	Ferreira	LAAS-CNRS - ESR1
Roman	Gansch	Robert Bosch GmbH
Vibhu	Gautam	University of York - ESR11
Jérémie	Guiochet	LAAS-CNRS
Ibrahim	Habli	University of York
Yuan	Liao	Fraunhofer ESK - ESR2
Tianlei	Miao	RH Marine - ESR12
Peter	Munk	Robert Bosch GmbH
Aleksandr	Ovechkin	KU Leuven - ESR5
Davy	Pissoort	KU Leuven

First Name	Last Name	Affiliation
Nina	Poumpalova	EC REA Project Officer
Patrick	Ringeard	Airbus Operations SAS
Alastair	Ruddle	Horiba MIRA Ltd
Luca	Sartori	LAAS-CNRS - ESR6
Stephane	Stroobant	KU Leuven
Zaid	Tahir	University of York - ESR7
Hassan	Timzizi	KU Leuven - ESR9
Maria	Trapp	Fraunhofer ESK
Dejana	Ugrenovic	KU Leuven - ESR4
Jens	Vankeirsbilck	KU Leuven
Dries	Vanoost	KU Leuven
Marcel	Verhoeven	CNH Industrial
Hélène	Waeselynck	LAAS-CNRS
Fang	Yan	University of York - ESR10
Joao Vitor	Zacchi	Fraunhofer ESK - ESR3

Safer Autonomous Systems

9

SAS Consortium



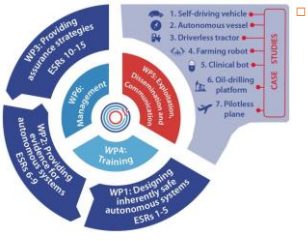
SAS Consortium

11

- 7 Beneficiaries in 5 Countries:
  - BE: KU Leuven (4 ESRs)
  - UK: University of York (4 ESRs)
  - FR: LAAS-CNRS (2 ESRs)
  - GE: Fraunhofer (2 ESRs)
  - GE: Bosch (1 ESR)
  - UK: Horiba MIRA (1 ESR)
  - NL: RH Marine (1 ESR)
- 10 Partner Organisations:
  - GE: TU Kaiserslautern
  - BE: CNH Industrial
  - GE: SICK
  - UK: Jaguar Land Rover
  - UK: Lloyd's Register
  - FR: Airbus
  - FR: Naïo Technologies
  - NO: Equinor
  - NL: MARIN
  - IE: Portable Medical Technology

SAS Project Flow

12



- **Key goals/features:**
  - S/T programme
  - Training programme, incl. development of soft skills
  - Network-wide events
  - Active dissemination and outreach

"The destination, therefore, is clear; the route, however, is a difficult one. The Safer Autonomous Systems ITN project is designed to get us to our destination, safely."

SAS Work Packages

13

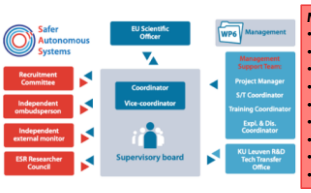
WP No.	WP Title	Lead Beneficiary No.	Start Month	End month	Activity Type	Lead Benef.	ESR involvement
1	Designing inherently safe autonomous systems	4	7	42	Research	FHG	ESR1–ESR5
2	Providing evidence for autonomous systems	5	7	42	Research	Bosch	ESR6–ESR9
3	Providing assurance strategies	2	7	42	Research	UoY	ESR10–ESR15
4	Training	3	7	48	Training	LAAS	All ESRs
5	Exploitation, Dissemination and Communication	6	1	48	Dissemination	MIRA	All ESRs
6	Management	1	1	48	Management	KU Leuven	All ESRs

WP Leaders:
WP1: M. Trapp **WP2**: P. Munk **WP3**: R. Alexander
WP4: J. Guiochet **WP5**: A. Ruddle **WP6**: S. Stroobant

Each WP Leader is responsible for presenting the overview of the results at the network-wide meetings and reporting to the EC (short review reports based on templates provided by the MST)

SAS Project Management (Team)

14



Management Support Team:
- Coordinator: D. Pissoort
- Vice-Coordinator: J. Boydens
- Project Manager: S. Stroobant
- S/T Coordinator: D. Vanoost
- Training Coordinator: J. Guiochet
- Expl. & Dis. Coordinator: A. Ruddle
- TTO: L. Lanneau
- Ombudsperson: T. Dhaese
- External **ADVISOR**: P. McGuiness

ESR representative, appointed after elections from the ESR Researcher Council, as a member of the Supervisory Board is **Luca Sartori** from LAAS-CNRS.

‼ Starting from M12, at least one conference call should be organized for each technical work package to monitor if all scientific and technical aspects of the ETN SAS project remain on track ‼

SAS Supervisory Board

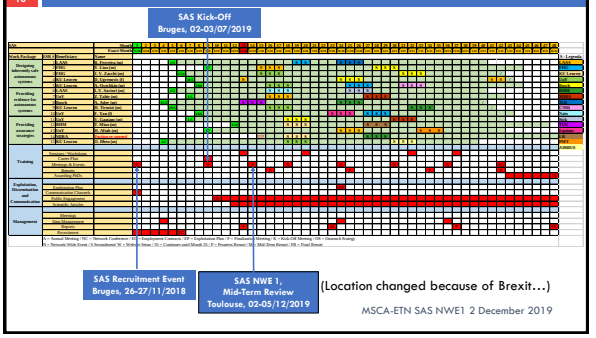
15

Group 1 (1 vote per beneficiary):
- D. Pissoort (PC, KU Leuven)
- J. Boydens (VC, KU Leuven)
- D. Vanoost (S/T C, KU Leuven)
- One representative from each Project Beneficiary:
  - P. Valcke (KU Leuven)
  - I. Habli (University of York)
  - J. Guiochet (LAAS-CNRS)
  - M. Trapp (Fraunhofer-ESK)
  - P. Munk (Bosch)
  - A. Ruddle (HORIBA-Mira)
  - E. el Amam (RH Marine)

Group 2 (no formal voting rights):
- S. Stroobant (PM, KU Leuven)
- One representative from each Partner Organisation:
  - P. Liggesmeyer (TU Kaiserlautern)
  - M. Verhoeven (CNHi)
  - M. Albert (Sick)
  - H. Joshi (Jaguar Land Rover)
  - R. Bridgeman (Lloyd's Register)
  - E. Landre (Equinor)
  - C. Seguineau (Naïo)
  - P. Ringeard (Airbus)
  - J.H. de Jong (Marin)
  - E. O'Caroll (PMT)
- **Luca Sartori** as the ESR representative

SAS Gantt Chart (M1 = Nov 2018)

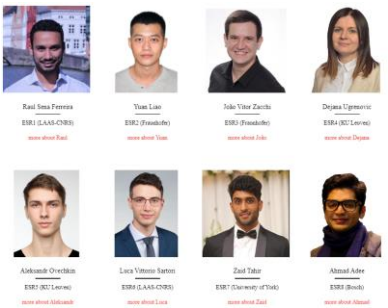
16



(Location changed because of Brexit…)

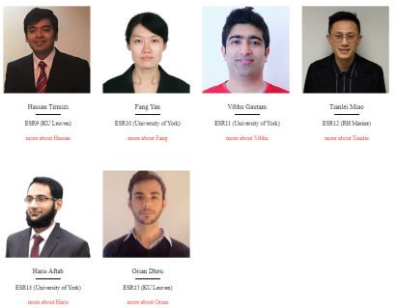
Recruited and started ESRs (14/15)

17



Recruited and started ESRs (14/15)

18



Recruitment: Things to Remember!

19

- Duration of appointments: 36 months (additional funding required in case of necessity of 4th year)
- All ESRs must be recruited under an employment contract
- All ESRs must be informed of their rights and obligations
  - All ESRs must receive the ITN information packages
  - All ESRs must receive a copy of the SAS Grant Agreement (including Annex I)

Recruitment: ESR14 Open Position

20

- @Alastair: status regarding the ESR14 Open Position at Horiba-Mira?

SAS Supervisory Committees (1/2)

21

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR1	R. S. Ferreira (Brazil) (m)	LAAS	J. Guiochet (LAAS), H. Waeselynck (LAAS)	M. Trapp (FHG), H. Joshi (JLR)
ESR2	Y. Liao (China) (m)	FHG	M. Trapp (FHG)	J.C. Fabre (LAAS), R. Gansch (Bosch)
ESR3	J. V. Zacchi (Brazil) (m)	FHG	M. Trapp (FHG)	I. Habli (UoY), R. Gansch (Bosch)
ESR4	D. Ugrenovic (Bosnia-Herzegovina) (f)	KU Leuven	J. Boydens (KU Leuven), T. Holvoet (KU Leuven)	P. Munk (Bosch), P. Hellinckx (UAntwerpen)
ESR5	A. Ovechkin (Russia) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	E. el Amam (RH Marine), John Dawson (UoY)
ESR6	L.V. Sartori (Italy) (m)	LAAS	H. Waeselynck (LAAS), J. Guiochet (LAAS)	R. Alexander (UoY), M. Albert (Sick)
ESR7	Z. Tahir (Pakistan) (m)	UoY	R. Alexander (UoY)	H. Waeselynck (LAAS), D. Ward (Horiba-Mira)
ESR8	A. Adee (Pakistan) (m)	Bosch	P. Liggesmeyer (TUK), P. Munk (Bosch)	J. Boydens (KU Leuven)

SAS Supervisory Committees (2/2)

22

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR9	H. Tirmizi (Pakistan) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	A. Ruddle (Horiba-Mira), P. Leroux (KU Leuven)
ESR10	F. Yan (China) (f)	UoY	S. Foster (UoY), I. Habli (UoY)	J. Guiochet (LAAS), E. Landre (Equinor)
ESR11	V. Gautam (India) (m)	UoY	R. Alexander (UoY), R. Hawkins (UoY)	R. Gansch (Bosch)
ESR12	T. Miao (China)(m)	RH Marine	D. Pissoort (KU Leuven), P. Slaets (KU Leuven)	E. el Amam (RH Marine), J. McDermid (UoY)
ESR13	H. Aftab (Pakistan)(m)	UoY	I. Habli (UoY)	J. Guiochet (LAAS), E. O'Caroll (PMT)
ESR14	---	Horiba-Mira	M. Nicholson (UoY), J. McDermid (UoY), A. Ruddle (Horiba-Mira)	D. Pissoort (KU Leuven)
ESR15	O. Dheu (France) (m)	KU Leuven	P. Valcke (KU Leuven)	P. Ringeard (Airbus), D. Pissoort (KU Leuven)

Researcher Declarations

23

All 14 Researcher Declarations have been submitted

Researcher Declaration

No.	Fellow!	First Name	Last Name	Status	Recruitment Organisation	Start Date	End Date	Working Time Commitment	Duration
1	1	Ahmad	Adee	SUBMITTED	Robert Bosch GmbH	15-02-2019	14-02-2022	Full Time	36
2	2	Orian	Dheu	SUBMITTED	Katholieke Universiteit Leuven	01-02-2019	31-01-2022	Full Time	36
3	3	Luca	Vittorio Sartori	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
4	4	Raul	Sena Ferreira	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
5	5	Hassan	Tirmizi	SUBMITTED	Katholieke Universiteit Leuven	19-03-2019	18-03-2022	Full Time	36
6	6	Vibhu	Gautam	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
7	7	Zaid	Tahir	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
8	8	Dejana	Ugrenovic	SUBMITTED	Katholieke Universiteit Leuven	10-05-2019	09-05-2022	Full Time	36
9	9	Joao Vitor	Zacchi	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	15-04-2019	14-04-2022	Full Time	36
10	10	Yuan	Liao	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	01-07-2019	30-06-2022	Full Time	36
11	11	Fang	Yan	SUBMITTED	University Of York	18-06-2019	17-06-2022	Full Time	36
12	12	Aleksandr	Ovechkin	SUBMITTED	Katholieke Universiteit Leuven	19-06-2019	18-06-2022	Full Time	36
13	13	Haris	Aftab	SUBMITTED	University Of York	01-07-2019	30-06-2022	Full Time	36
14	14	Tianlei	Miao	SUBMITTED	Rh Marine Netherlands Bv	01-10-2019	30-09-2022	Full Time	36

PCDP

24

- All recruited ESRs developed, in dialogue with their supervisors, a Personal Career Development Plan (PCDP).
- 11 signed PCDPs have been uploaded to the participants portal (D4.2 PCDP Report) on Sept 19 2019.
- Signed PCDPs for ESR7, ESR11 and ESR12 have been sent to the SAS project manager and will be added to the already submitted Deliverable D4.2 PCDP Report after approval by the Project Officer.
- During SAS NWEs, PCDP progress sessions will be organised (ESRs & SAS Training Coordinator).
- Progress reports of the PCDPs to Supervisory Board are a 6 monthly recurring Deliverable.
- Every ESR is enrolled in a PhD except Zaid Tahir > new PCDP for Zaid has been signed and will be submitted

Training (1)

25

- During the SAS kick-off meeting (M9), the following trainings were given:
  - Open access and open science in scientific research (ESRs)
  - The Supervisor: role & responsibilities (Supervisors)

- The ESRs attended a training on Ethics and integrity in scientific research through conf-call on Oct 18 2019

Training (2)

26

- The ESRs are following research-specific trainings and general (obligatory) trainings organized by their doctoral schools, as well as (international) scientific and soft-skill workshops outside the project
- Network-wide trainings scheduled during the NWE1 (M13):
  - S/T Training: Fault tolerance (JC Fabre, LAAS-CNRS)
  - S/T Training: Dependable autonomous robots (J. Guiochet, LAAS-CNRS)
  - Soft-skill Training I: The keys to manage your doctoral project
  - Soft-skill Training II: Anticipate your career path during your PhD

First Secondments (1)

27

[MSCA ETN SAS] EARLY STAGE RESEARCHERS						
ESR	First Name	Last Name	Affiliation	1st Secondment Location	1st Secondment Period	1st Secondment Local Mentor
1	Raul Sena	Ferreira	LAAS-CNRS	Fraunhofer	May - June 2020 (2m)	M. Trapp
2	Yuan	Liao	Fraunhofer ESK	LAAS-CNRS	Jan - Mar 2020 (3m)	J.C. Fabre
3	Joao Vitor	Zacchi	Fraunhofer ESK	University of York	Jan - Mar 2020 (3m)	I. Habli
4	Dejana	Ugrenovic	KU Leuven	LAAS-CNRS	Nov - Dec 2019 (5w)	J. Guiochet
5	Aleksandr	Ovechkin	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
6	Luca Vittorio	Sartori	LAAS-CNRS	Nala	Feb - April 2020 (3m)	G. Severac
7	Zaid	Tahir	University of York	LAAS-CNRS	Feb - April 2020 (3m)	H. Waeselynck
8	Ahmad	Adee	Bosch	TUK	Nov 2019 - Jan 2020 (3m)	P. Liggesmeyer
9	Hassan	Tirmizi	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
10	Fang	Yan	University of York	Equinor	Sep - Nov 2020 (3m)	E. Londre
11	Vibhu	Gautam	University of York	Bosch	April - June 2020 (3m)	R. Gansch
12	Tianlei	Miao	RH Marine	KU Leuven	April - June 2020 (3m)	D. Pissoort
13	Haris	Afzab	University of York	LAAS-CNRS	Oct - Dec 2020 (3m)	J. Guiochet
14	--	--	Horiba-MIRA	KU Leuven	April - June 2020 (3m)	J. Boydens
15	Orion	Dheu	KU Leuven	University of York	April - June 2020 (3m)	R. Alexander

First Secondments (2)

28

- Modifications (schedule changes, topic, location) can only be performed after PREVIOUS APPROVAL and on request and should be communicated with the PM who reports this to the PO !!
- Check if ESR's nationalities cause issues for the foreseen secondments and if specific procedures need to be followed
- Align the secondment timings with the institutions hosting secondments
- Confirm the modificiations to the PM

First Secondments (3)

29

- After each Secondment a Secondment Report needs to be written by the ESR, and signed by the ESR and the Secondment Hosting Supervisor.
  Template will be send out by Stephane.
- **IMPORTANT**
  The Actual Secondment Period needs to be submitted at the H2020 Participant Portal (under the Tab 'Researchers') as soon as the Secondment has ended, so not sooner!

Ethics

30

- EC required us to write a dedicated deliverable on ethical issues and potential dual use related to autonomous systems
- Deliverable written through collaboration between KU Leuven and Univ. of York
- Voluntary ethical self-assessment by every ESR
- Ethical Board:
  - KU Leuven: Prof. A. Vedder, Dr. D. Vanoost
  - UoY: Dr. I. Habli

Safer Autonomous Systems

31 Communication and Dissemination Outreach

SAS Project Visual Identity (1/3)

32

To achieve the best dissemination and communication results, the following visual identifications and tools need to be used:

SAS Project Logo

Safer Autonomous Systems

SAS Project Visual Identity (2/3)

33

SAS Project Templates (for PPT, scientific conference presentations, newsletters, project reporting and deliverables)

Safer Autonomous Systems

EU H2020 MSCA-ETN SAS
KICK-OFF MEETING & NWE
JULY 2ND & 3RD 2019

Crowne Plaza, Bruges - BELGIUM

SAS Project Visual Identity (3/3)

34

EU funding acknowledgement

This project has received funding from the European Union's
EU Framework Programme for Research and Innovation
Horizon 2020 under Grant Agreement No. 812.788

Post

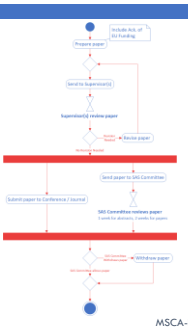
35

Scientific dissemination (peer-review publications) – Specific paragraph to be added in acknowldgement section – Publication procedure to be followed

"The research leading to these results has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No 812.788 (MSCA-ETN SAS). This publication reflects only the authors' view, exempting the European Union from any liability. Project website: http://etn-sas.eu/."

Paper Presubmission Procedure

36



Post Paper Publishing Procedure: OPEN ACCESS

37

- Each beneficiary must ensure OPEN ACCESS (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results (Article 29.2 of the Model Grant Agreement)
- **What to do? Must** as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications
- Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications

Post Paper Publishing Procedure: OPEN ACCESS

38

- **Where to deposit?**
  - An acknowledged repository:
    - subject specific (e.g. PubMed, arXiv)
    - institutional (e.g. Lirias)
    - general (Zenodo)
- **When to ensure Open Access?**
  - Must ensure open access to the deposited publication — via the repository — at the latest:
    - (i) on publication, if an electronic version is available for free via the publisher, or
    - (ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.

Post Paper Publishing Procedure: OPEN ACCESS

39

- **When to ensure Open Access? (continued…)**
  - Must ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication. The bibliographic metadata must be in a standard format and must include all of the following:
    - the terms "Marie Skłodowska-Curie Actions" ;
    - the name of the action, acronym and grant number;
    - the publication date, and length of embargo period if applicable, and
    - a persistent identifier.

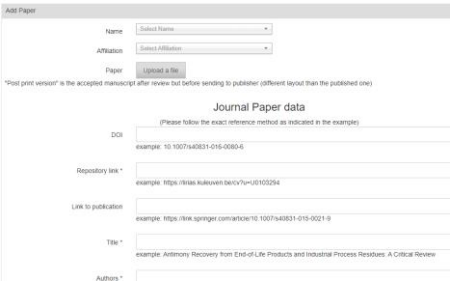
SAS Papers Archiving System

40

- http://papers.etn-sas.eu/user/login/

SAS Papers Archiving System

41



SAS Papers Archiving System

42

- Linked with our SAS Website
- Needs in addition to be updated through the H2020 Participant Portal

- Explanation and Training to the ESRs at this NWE

SAS Website

43

- New SAS-website since Sept 1 2019 (temporary website was available between June 27 2018 and Sep 1 2019)

SAS Blogs, Social Media,…

44

- ESRs are actively involved in communication and dissemination activities.

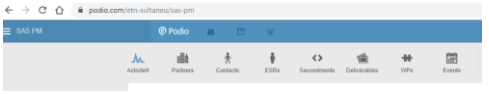
Facebook	Twitter	LinkedIn	Blogging
Zaid Tahir (York)	Yuan Liao (Fraunhofer)	Joao Vitor Zacchi (Fraunhofer)	Joao Vitor Zacchi (Fraunhofer)
Dejana Ugrenovic (KU Leuven)		Hassan Tirmizi (KU Leuven)	Ahmad Adee (Bosch)
			Orian Dheu (KU Leuven)

- So far, the ESRs have written and published 5 blog posts presenting their work for the general public
- They have published several posts on Social Media (on SAS Facebook, Twitter & LinkedIn channels)

SAS Internal Communication

45

- **PODIO**
  - A password-protected Intranet
    > start-up at Toulouse with ESR Training



  - Developed Intranet: also storage space for ESRs' PCDPs, RTDEs, Progress Reports, Deliverables, minutes of WP meetings, NWE Reports,…

SAS Video

46

- A SAS Promo Video will be developed and published during the second year of the SAS Project
- This video will explain the project goals, and present the team and the collaborating partners.
- This video will be made in collaboration with Storyrunner. They are very acquainted with developing Marie Curie/Best Practice Award Winning Videos in collaboration with KU Leuven

Safer Autonomous Systems

47 Deliverables & Milestones

Project Deliverables

48

Submitted Deliverables

- D5.1 Project website
- D6.1 Internal/External Communication channels
- D6.5 Consortium Agreement
- D6.6 Supervisory Board of the Network
- D5.5 Data Management Plan
- D6.2 Employment contracts with ESRs
- D4.1 SAS Kick-Off Meeting
- D4.2 15 Personal Career Development Plans (PCDP)
- D5.2 Dissemination, communication and outreach strategy
- D7.1 GEN – Requirement No. 1
- D6.3 Progress report

Project Deliverables

49

- Upcoming Deliverables

WP1	D1.1	D2	Literature review of safety challenges associated with the use of intelligent conversational bots	Literature review of safety challenges associat...	UY
WP6	D6.3	D24	Progress Report	Progress Report submitted to the REA covering 1...	KU Leuven
WP2	D2.1	D2	Report on first experiment of the virtual world generation on a robotic simulator	Report on first experiment of the virtual world...	CNRS
WP4	D4.3	D25	SAS Network-Wide Event I (followed by Co-Thinking Session 1)	SAS Network Wide Event in York (UK) @ the Dept....	UY
WP4	D4.13	D35	SAS Special Session/Workshop I	Workshop at SAFECOMP 2019	CNRS

- **Due dates of the S/T Deliverables WP2 and WP3 have been postponed**

Project Milestones

50

Number	Name	Lead Beneficiary	Delivery Date (annex I)	Achieved	Delivery Date (actual)
1	Internal and external communication	KU Leuven	30 Nov 2018	✔	16 apr 2019
2	Start-up IRT meeting	KU Leuven	30 Nov 2018	✔	27 nov 2018
5	SAS Kick-Off Meeting	KU Leuven	31 May 2019	✔	03 jul 2019
6	Personal Career Development Plans	HIRA	31 Jul 2019		
17	Review of relevant techniques from functional safety, cyber security, dep	HIRA	31 Oct 2019		
16	Documented set of vehicle use cases for assurance case structures incorp	UY	31 Oct 2019		
3	Planned recruitments completed	KU Leuven	31 Oct 2019		
7	1st Annual SB meeting	KU Leuven	31 Oct 2019		
4	All recruited fellows enrolled in PhD programme	CNRS	31 Oct 2019		
20	Decision on which model-based system analysis suits are fitted best to cc	Bosch	30 Nov 2019		
11	SAS Network Wide Event I	UY	30 Nov 2019		
19	Decision on which wireless communication protocols to be considered for	KU Leuven	30 Nov 2019		
35	Project mid-term check at month 13-15	KU Leuven	30 Nov 2019		
18	Different safety assurance frameworks compared on simplified, virtual a	CNRS	30 Nov 2019		
21	First experiment of virtual world generation completed for robotic simul	CNRS	30 Nov 2019		

- Due dates of the most S/T Milestones have been postponed. **Status S/T Milestones 18 and 19?**

Deliverables and Milestones

51

- Project Deliverables and Milestones will be furthermore discussed during our Work Package Parallel Sessions

Annex 5
PPT Presentation “WP parallel sessions”

Safer Autonomous Systems

SCIENTIFIC WORK PACKAGES 1-3
PARALLEL SESSIONS

MSCA-ETN SAS Network Wide Event 1
2 December 2019, LAAS-CNRS, Toulouse - FRANCE

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

S/T Work Packages Parallel Sessions

[MSCA ETN SAS] SCIENTIFIC WORK PACKAGES FOR NWE 1 TOULOUSE			
	WP1	WP2	WP3
WP leader	Mario Trapp (Fraunhofer)	Peter Munk (Bosch)	Rob Alexander (UoY) > replaced by Alastair Ruddle (MIRA)?
ESRs	ESR1: Raul Sena Ferreira (LAAS)	ESR6: Luca Sartori (LAAS)	ESR10: Fang Yan (UoY)
	ESR2: Yuan Liao (Fraunhofer)	ESR7: Zaid Tahir (UoY)	ESR11: Vibhu Gautam (UoY)
	ESR3: Joao Vitor Zacchi (Fraunhofer)	ESR8: Ahmad Adee (Bosch)	ESR12: Tianlei Miao (RH Marine)
	ESR4: Dejana Ugrenovic (KU Leuven)	ESR9: Hassan Tirmizi (KU Leuven)	ESR13: Haris Aftab (UoY)
	ESR5: Aleksandr Ovechkin (KU Leuven)		ESR14: --
			ESR15: Orian Dheu (KU Leuven)
Supervisors + Partner Organisations	Jérémie Guiochet (LAAS)	Hélène Waeselynck (LAAS)	Ibrahim Habli (UoY)
	Mario Trapp (Fraunhofer)		Rob Alexander (UoY)
	Jeroen Boydens (KU Leuven)	Peter Munk (Bosch)	Ehab el Amam (RH Marine)
	Jens Vankeirsbilck (KU Leuven)	Davy Pissoort (KU Leuven)	Alastair Ruddle (Horiba MIRA) > WP3 leader?
	+ Representatives of JLR and CNHi	Roman Gansch (Bosch)	+ Representatives of LR, Equinor, Airbus and PMT
	Marcel Verhoeven (CNHi)	+ Representatives of Nidec, SICK and TUK	Patrick Ringeard (Airbus)
		Magnus Albert (SICK)	

S/T Work Packages Parallel Sessions

- **SAS Scientific Work Packages 1-3**
  - Interaction between ESRs, Supervisors and the representatives of the Partner Organisations regarding the specific WP
    - Tasks within each WP
    - Scientific deliverables within each WP
    - Milestones within each WP
    - **DATA MANAGEMENT PLAN: applicable for every ESR**
    - Actions within each WP
    - Q&A session to clarify technical aspects and practicalities

S/T Work Packages Parallel Sessions

- **SAS Scientific/Technical Coordinator**

Dries Vanoost

- **Some task of the S/T Coordinator**
  - Follow up Scientific and Technical progress
  - Encouragement and support to the ESRs
  - Setup the bi-monthly teleconference meetings
  - Ensure continuous monitoring and communication with all the network Participants
  - …

WP1: Designing inherently safe autonomous systems

ESRs

- ESR1: Raul Sena Ferreira (LAAS)
- ESR2: Yuan Liao (Fraunhofer)
- ESR3: João Vitor Zacchi (Fraunhofer)
- ESR4: Dejana Ugrenovic (KU Leuven)
- ESR5: Aleksandr Ovechkin (KU Leuven)

Supervisors

- ***Mario Trapp - Fraunhofer***
- Jérémie Guiochet - LAAS
- Jeroen Boydens - KU Leuven
- Davy Pissoort – KU Leuven
- Representatives of JLR and CNHi

WP1: Designing inherently safe autonomous systems

7

ESRs progress

- ESR1 Raul (LAAS): ML verification @ runtime
- ESR2 Yuan (Fraunhofer): Resilient middleware
- ESR3 João (Fraunhofer): Systems of sytems
- ESR4 Dejana (KU Leuven): Means / soft design lines
- ESR5 Aleksandr (KU Leuven): HW, Fault Tolerance

WP1: Designing inherently safe autonomous systems

8

Tasks

No.	Title	ESR
T1.1	Development of a generic framework to monitor and handle safety of autonomous systems during run-time	Raul Sena Ferreira
T1.2	Development of an adaptive platform for resilient autonomous systems based on a MAPE-K cycle	Yuan Liao
T1.3	Dynamic safety handling of autonomous systems-of-systems with run-time safety contracts	João Vitor Zacchi
T1.4	Creating Software Design Guidelines and Testing Specifications for Non-Functional Requirements in Safety-critical Autonomous Systems	Dejana Ugrenovic
T1.5	Making Connectivity Work Reliably in a diverse Range of Environments	Aleksandr Ovechkin

WP1: Designing inherently safe autonomous systems

9

Deliverables

No.	Title	Lead	Type	Diss. Level	Due Date
D1.1	Report on first version of the language for the expression of safety constraints and synthesis of safety	CNRS (Raul)	Report	public	M 24 (Oct. 20)
D1.2	Publication on initial implementation of run-time safety contracts and according monitoring architectures	Fraunhofer (João)	Report	public	M 27 (Jan. 21)
D1.3	Publication on the effectiveness of EM-diverse redundancy to harden wireless interconnectivity	KU Leuven (Aleksandr)	Report	public	M 31 (May 21)
D1.4	Report on validation of MAPE-K-based architecture and underlying adaptation concepts in an industrial context	Fraunhofer (Yuan)	Report	public	M 42 (Apr. 22)
D1.5	Report on the practical assessment and evaluation of safety-critical software design and testing strategies	KU Leuven (Dejana)	Report	public	M 42 (Apr. 22)

WP1: Designing inherently safe autonomous systems

10

Milestones

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS1.1	Different safety assurance frameworks compared on simplified, virtual autonomous system	LAAS (Raul)	Report available	M 13 (Nov. 19)	Dec 2, 2019
MS1.2	Decision on which wireless communication protocols to be considered for study on EMI-aware design techniques and measures **+5 months: rationale > after the secondment of the ESR at University of York**	KU Leuven (Aleksandr)	Overview list available	**M 18 (April 20)** M 13 *(Nov. 19)*	
MS1.3	Initial implementation of run-time safety contracts and according monitoring architectures	Fraunhofer (João)	Report available	M 27 (Jan. 21)	
MS1.4	Software design and testing strategies assessed on testcase of autonomous robot	KU Leuven (Dejana)	Report available	M 36 (Oct. 21)	
MS1.5	Peer-reviewed publication on full implementation of MAPE-K based adaptive platform for autonomous systems	Fraunhofer (Yuan)	Paper accepted for publication in peer-reviewed journal	M 40 (Feb. 22)	

WP1: Designing inherently safe autonomous systems

11

Data Management Plan: Data Summary

ESR	Supervisor	WP/Task	Data type	Data format & estimated size	Origin of data	Data Dissemination level & platform	Data utility
Safer Autonomous Systems							
1	LAAS	1.1 Development of a generic framework to monitor and handle safety of autonomous systems during run-time	simulation results	Safety monitor prototype (program)	From researchers from self-defined cases	Public	Academic and industrial researchers and engineers working in this field
2	Fraunhofer	1.2 Development of an adaptive platform for resilient autonomous systems based on a MAPE-K cycle	Analytical results	Word/Excel documents	From researchers from self-defined cases	Via the specific deliverable and through public dissemination	Other scientists in the field
3	Fraunhofer	1.3 Dynamic safety handling of autonomous systems-of-systems with run-time safety contracts	Analytical results	Word/Excel documents	From researchers from self-defined cases	Via the specific deliverable and through public dissemination	Other scientists in the field
4	KU Leuven	1.4 Creating Software Design Guidelines and Testing Specifications for Non-Functional Requirements in Safety-critical Autonomous Systems	Source code, simulation data	Text files, Excel files (or simular), figures, simulation projects,... size: order ≤ 1Tbyte	From researchers from self-defined cases	Via the specific deliverable and through public dissemination	Academic and industrial researchers and engineers working in this field
5	KU Leuven	1.5 Making Connectivity Work Reliably in a diverse Range of Environments	simulation results, measurement data	Text files, Excel files (or simular), figures, simulation projects,... size: order ≤ 1Tbyte	From researchers from self-defined cases	Via the specific deliverable and through public dissemination	Academic and industrial researchers and engineers working in this field

WP1: Designing inherently safe autonomous systems

12

Data Management Plan: FAIR Data

3.1 Making data findable, including provisions of metadata

WP Task Deliverable	Data type	Data format	Unique identifiers	Data naming conventions	Metadata keywords	Upload to a searchable resource

3.2 Making data openly accessible

WP Task Deliverable	Data type	Data format	Access method	Access location	License type	Documentation provided

3.3 Making data interoperable

WP Task Deliverable	Data type	Data format	Metadata keywords	Documentation provided	Reuse of data

3.4 Increase data re-use (through clarifying licenses)

WP Task Deliverable	Data type	Data format	License type	Data Quality Assurance	Retention period	Embargo period

WP1: Designing inherently safe autonomous systems

13

Actions

- **MS 1.1 LAAS-CNRS; MS 1.2 KU Leuven**
- LaTeX Template for MS and Deliverables
- Discuss journals with supervisors
- DMP:
  - Public data, available through SAS Website (stored on institute servers)
  - Private data, protected by NDA, local for each partner
  - Metadata on both public and private data on website: be aware of the retention period (EU 5 years!)
  - Regular meetings through SkypeFB, monthly + meeting notes
  - Sharing papers through Dropbox, add supervisors

WP2: Providing evidence for autonomous systems

14

ESRs

- ESR6: Luca V. Sartori (LAAS)
- ESR7: Zaid Tahir (University of York)
- ESR8: Ahmed Adee (Bosch)
- ESR9: Hassan Tirmizi (KU Leuven)

Supervisors

- Hélène Waeselynck - LAAS
- Rob Alexander - UoY
- ***Peter Munk - Bosch***
- Davy Pissoort- KU Leuven
- Representatives of Naïo, SICK and TUK

WP2: Providing evidence for autonomous systems

15

ESRs progress

- ESR6 Luca (LAAS):
  - software testing in simulation
  - the main novel idea: how to optimise the testing given the limited time one has
- ESR7 Zaid (UoYork):
  - verification and validation of autonomous systems on coverage based testing
- ESR8 Ahmad (Bosch):
  - SOTIF – safety of the intended functionality
  - linking to IEC 61508 for commons cause analysis
- ESR9 Hassan (KU Leuven):
  - model-based analysis for robustness against EMI
  - inherent EMI-resilient systems

WP2: Providing evidence for autonomous systems

16

Tasks

No.	Title	ESR
T2.1	Virtual worlds generation for testing autonomous robots in simulation	Luca Vittorio Sartori
T2.2	Rigorous Design and Evaluation of Situation Coverage Testing for Autonomous Vehicles	Zaid Tahir
T2.3	Model-based System Analysis Techniques to determine propagation paths of functional insufficiencies in software-intensive systems	Ahmad Adee
T2.4	Model-based System Analysis of the Robustness of Autonomous Systems against ElectroMagnetic Interference	Hassan Tirmizi

WP2: Providing evidence for autonomous systems

17

Deliverables

No.	Title	Lead	Type	Diss. Level	Due Date
D2.1	Report on first experiment of the virtual worlds generation on a robotic simulator **+6 months: rationale > late start of ESR and IP issues with the case study > after the secondment**	LAAS (Luca)	Report	public	**M 19 (May 20)** *M 13 (Nov. 19)*
D2.2	Report on validation of virtual EMI-aware V&V framework on academic testcases	KU Leuven (Hassan)	Report	public	M 31 (May 21)
D2.3	Report discussing the completeness of model-based system analysis when dealing with functional insufficiencies	Bosch (Ahmad)	Report	public	M 31 (May 21)
D2.4	Publication on the situation coverage testing approach applied to a representative automotive case study	University of York (Zaid)	Report	public	M 40 (Feb. 22)

WP2: Providing evidence for autonomous systems

18

Milestones

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS2.1	Decision on which model-based system analysis suits are fitted best to cope with functional insufficiencies	Bosch (Ahmad)	Overview on (dis)advantages of the model-based system analysis suits available	M 13 (Nov. 19)	Nov 27, 2019
MS2.2	First experiment of virtual world generation completed for robotic simulator **+6 months: rationale > late start of ESR and IP issues with the case study**	LAAS (Luca)	Report available	**M 19 (May 20)** *M 13 (Nov. 19)*	
MS2.3	Statistical V&V framework for EMI analysis completed	KU Leuven (Hassan)	Simulation framework available	M 22 (Aug. 20)	
MS2.4	Complete prototype tooling for situation coverage testing available and working for a small example	University of York (Zaid)	Description of tools available	M 26 (Dec. 20)	

19

Data Management Plan: Data Summary

ESR	Supervisor	WP/Task	Data type	Data format & estimated size	Origin of data	Data Dissemination level & platform	Data utility
WP2 Providing evidence for autonomous systems							
6	AMS	1.1 Virtual world generation for testing autonomous robots in simulation	Simulation results	Program and execution traces	From researchers from self-defined cases	Public	Academic and industrial researchers and engineers working in this field
7	Lotrak	1.2 Rigorous Design and Evaluation of Situation Coverage Testing for Autonomous Vehicles	Code Simulation files, situation coverage data files, final result files	Code — C or Java or Python Input and output data files — unknown at this time Size — no way to estimate now, probably multiple GB	From researchers from self-defined cases, virtual environments	GitHub, GitHub etc. Free download with clear instructions	Allows our experiments to be reproduced, expanded, improved.
8	Bosch	2.3 Model-based System Analysis Techniques to determine propagation paths of functional insufficiencies in software-intensive systems	Analytical results	To be determined	From researchers from self-defined cases	To be determined	Other scientists in the field
9	KU Leuven	2.4 Model-based System Analysis of the Robustness of Autonomous Systems against Electromagnetic Interference	Simulation results, measurement data	Text files, Excel files (or simular); figures, simulation projects... Size: order 1 Tbyte	From researchers from self-defined cases	Via the specific deliverable and through public dissemination	Academic and industrial researchers and engineers working in this field

20

Data Management Plan: FAIR Data

3.1 Making data findable, including provisions of metadata

WP Task Deliverable	Data type	Data format	Unique identifiers	Data naming conventions	Metadata keywords	Upload to a searchable resource

3.2 Making data openly accessible

WP Task Deliverable	Data type	Data format	Access: method	Access: location	License type	Documentation provided

3.3 Making data interoperable

WP Task Deliverable	Data type	Data format	Metadata keywords	Documentation provided	Reuse of data

3.4 Increase data re-use (through clarifying licenses)

WP Task Deliverable	Data type	Data format	License type	Data Quality Assurance	Retention period	Embargo period

21

Actions

- Open Data Management:
  - How to make it available?
  - Sufficient to do it on website?
  - How to do this in long-term?
- Which data?
  - Luca:
    - Simulation data?
    - Could code be provided?
    - What
  - Zaid: at least one case that is fully open
  - Ahmed:
    - Similar problem
    - Has his "own" case study
  - Hassan:
    - Simulation framework
    - So far no issues

22

ESRs

- ESR10: Fang Yan (University of York)
- ESR11: Vibhu Gautam (University of York)
- ESR12: Tianlei Miao (RH Marine)
- ESR13: Haris Aftab (University of York)
- ESR14: --- (Horiba-MIRA)
- ESR15: Orian Dheu (KU Leuven)

Supervisors

- Simon Foster - UoY
- Rob Alexander - UoY
- Ehab el Amam - RH Marine
- Ibrahim Habli - UoY
- ***Alastair Ruddle - Horiba-MIRA***
- Peggy Valcke - KU Leuven
- Representatives of LR, Equinor, Airbus and PMT

23

ESRs progress

- ESR10 Fang (UoYork): literature review to refine research question, focussed on executable assurance case.
- ESR11 Vibhu (UoYork): investigating identification and management of uncertainties, and how to take account of them in safety cases.
- ESR12 Tianlei (RH Marine): literature review for data fusion, route planning, collision avoidance.
- ESR13 Haris (UoYork): literature review and looking at implications of using consumer electronics in clinical healtcare apllications e.g. Chronic diabetes – is it safe?
- ESR14 --- (Horiba-Mira): no ESR currently in place.
- ESR15 Orian (KU Leuven): research proposal, literature review and research questions defended. Comparative analysis of liability issues between Belgium, France, and England and Wales.

24

Tasks

No.	Title	ESR
T3.1	From static assurance cases at design-time to executable assurance cases at run-time	Fang Yan
T3.2	Assurance case structures for machine learning in the decision making of highly autonomous systems	Vibhu Gautam
T3.3	Assuring autonomous sailing from A tot B while minimizing operational costs	Tianlei Miao
T3.4	Safety assurance for Clinical Conversational Bots	Haris Aftab
T3.5	Dependability Assurance for Vehicle Autonomy	---
T3.6	Between Safety and Liability: Towards a Liability Allocation Framework for Safe Autonomous Systems	Orian Dheu

Safer Autonomous Systems

WP3: Providing Assurance Strategies

25

Deliverables D3.1 – 3.2 – 3.3

No.	Title	Lead	Type	Diss. Level	Due Date
D3.1	Literature review of safety challenges associated with the use of intelligent conversational bots **+8 months: rationale > program logic**	University of York (Haris)	Report	public	**M 21 (July 20)** *M 13 (Nov. 19)*
D3.2	Report on executable safety assurance case models for autonomous drilling use-case **+3 months: rationale > depending on secondment timing**	University of York (Fang)	Report	public	**M 27 (Jan 21)** *M 24 (Okt. 20)*
D3.3	Documented assurance case patterns for ML in autonomous vehicles **+4 months: rationale > depends on secondment timing at Horiba-MIRA for ESR11**	University of York (Vibhu)	Report	public	**M 34 (Aug. 21)** *M 30 (Apr. 21)*

Safer Autonomous Systems

WP3: Providing Assurance Strategies

26

Deliverables D3.4 – 3.5 – 3.6

No.	Title	Lead	Type	Diss. Level	Due Date
D3.4	Publication on bottlenecks and inconsistencies in the existing liability regimes when applied to autonomous systems and proposed new criteria for liability allocation **+2 months: rationale > program logic**	KU Leuven (Orian)	Report	public	**M 36 (Okt. 21)** *M 34 (Aug. 21)*
D3.5	Report on simulation environment comprising algorithms for optimization, situational awareness and collision avoidance **+12 months: rationale > recruitment delays (RH Marine)**	RH Marine (Tianlei)	Report	public	**M 48 (Okt. 22)** *M 36 (Okt. 21)*
D3.6	Report on pilot demonstration of the common framework for developing wider dependability assurance cases **+8 months: rationale > recruitment delays (Horiba-MIRA)**	Horiba – MIRA (---)	Report	public	**M48 (Okt. 22)** *M 40 (Feb. 22)*

Safer Autonomous Systems

WP3: Providing Assurance Strategies

27

Milestones MS3.1 – 3.2 – 3.3

No.	Title	Lead	Means of verific.	Due Date	Delivery Data
MS3.1	Documented set of vehicle use cases for assurance case structures incorporating machine learning **+9 months: rationale > depends on secondment timing at Bosch for ESR11**	University of York (Vibhu)	Report available	**M 21 (July 20)** *M 12 (Okt. 19)*	
MS3.2	Review of relevant techniques from functional safety, cyber security, dependability, etc. **+9 months: rationale > recruitment delays (Horiba-Mira)**	Horiba – MIRA (---)	Overview list available	**M 21 (July 20)** *M 12 (Okt. 19)*	
MS3.3	Bottlenecks and inconsistencies in the existing liability regimes when applied to autonomous systems identified **+10 months: rationale > program logic**	KU Leuven (Orian)	Report available	**M 28 (Feb. 21)** *M 18 (Apr. 20)*	

Safer Autonomous Systems

WP3: Providing Assurance Strategies

28

Milestones MS3.4 – 3.5 – 3.6

No.	Title	Lead	Means of verific.	Due Date	Delivery Date
MS3.4	Safety concept and architectural strategies for clinical conversational bots **+12 months: rationale > program logic**	University of York (Haris)	Report available	**M 37 (Nov. 21)** *M 25 (Nov. 20)*	
MS3.5	Situational and collision avoidance algorithms finalized **+12 months: rationale > recruitment delays (RH Marine)**	RH Marine (Tianlei)	Algorithms implemented and tested	**M 40 (Feb. 22)** *M 28 (Feb. 21)*	
MS3.6	Run-time Assurance Engine using executable structured assurance case meta-models completed **+2 months: rationale > recruitment delays**	University of York (Fang)	Assurance engine available	**M 33 (July 21)** *M 31 (May 21)*	

Safer Autonomous Systems

WP3: Providing Assurance Strategies

29

Data Management Plan: Data Summary

ESR	Supervisor	WP/Task	Data type	Data format & estimated size	Origin of data	Data Dissemination level & platform	Data utility
WP3 Providing assurance strategies							
10	tomark	3.1 From static assurance cases at design-time to executable assurance cases at run-time	Numerical input, data from secondment organization, code for formalverification	Program size to be determined	From researcher or the use of open-source code	Publicly on Github with instructions to run and on the specific deliverable	Other scientists in the field
11	tomark	3.2 Assurance case structures for machine learning in the decision making of highly autonomous systems	Open Source Image - Data for Example (http://benchmark.ini.rub.de/) Modifications to and scripts for Open Source simulators like Carla, SelfDriving by Udacity	Images and Videos, size based on availability Python code	https://benchmark.ini.rub.de/ https://carla.org/ https://github.com/udacity/self-driving-car-sim + own modifications and scripts.	Original data hosts as much as possible on Github and on request	Reproducability of results
12	Rio Marine	3.5 Assuring autonomous sailing from A to B while minimizing operational costs	Simulation results	To be determined	From researchers from self-defined cases	To be determined	To be determined
13	tomark	3.4 Safety assurance for Clinical Conversational Bots	To be determined	To be determined	To be determined	To be determined	To be determined
14	Horiba-MIRA	3.5 Dependability Assurance for Vehicle Autonomy	Framework for assurance cases. Classifications and ranking schemes, Graphical process models.	Text files, Excel files (or simulor), figures, simulation projects,... size: order 1 Tbyte	From researchers from self-defined cases. Anonymized real-world data accrued from client projects.	Via the specific deliverable and through public dissemination	Academic and industrial researchers and engineers working in this field
15	KU Leuven	3.6 Between Safety and Liability: Towards a Liability Allocation Framework for Safe Autonomous Systems	Qualitative data. Most of the data input and output will not be numerical. No sensitive data is expected to be used during the course of the study (except for confidential notes or interviews provided for research purposes).	Text files, Excel files (or simulor), figures, simulation projects,... size: order 1 Tbyte	- existing legislation - case law - reports and studies - online legal journals and scholarly research papers (online portals) - academic books - interviews or confidentional notes.	In principle, the research deliverables (and some publications) will be made available to the public. However, research input and preparatory material will not be published, unless necessary. Moreover, confidential interviews notes or reading material will be subject to limited or no public release.	Multiple uses: collected data will enable the researcher to assess the legal frameworks. Target audience of the output data: academic and industrial researchers, legal scholars and policymakers.

Safer Autonomous Systems

WP3: Providing Assurance Strategies

30

Data Management Plan: FAIR Data

3.1 Making data findable, including provisions of metadata

WP Task Deliverable	Data type	Data format	Unique identifiers	Data naming conventions	Metadata keywords	Upload to a searchable resource

3.2 Making data openly accessible

WP Task Deliverable	Data type	Data format	Access method	Access location	License type	Documentation provided

3.3 Making data interoperable

WP Task Deliverable	Data type	Data format	Metadata keywords	Documentation provided	Reuse of data

3.4 Increase data re-use (through clarifying licenses)

WP Task Deliverable	Data type	Data format	License type	Data Quality Assurance	Retention period	Embargo period

Safer Autonomous Systems

WP3: Providing Assurance Strategies

Actions

- Data Management Plan:
  - What data are we talking about? Data around safety is more easier…
  - Synthetic data
  - Making data opensource: use some open use case
  - Anamoly data will be difficult
- ESRs
  - ESR10 (Fang): possible problem IP regarding the secondment
  - ESR11 (Vibhu): open source image is the only liberty (game engine)
  - ESR12 (Tianlei): simulation result visualization which can be public
  - ESR13 (Haris): clinical > be aware of personal information
  - ESR14 (---): get real-world data but not able to retribute it, make syntactic data
  - ESR15 (Orian): no issues

Annex 6
Agenda Supervisory Board Meeting NWE I Dec 2, 2019

Safer Autonomous Systems

SUPERVISORY BOARD MEETING
2 DECEMBER 2019, TOULOUSE

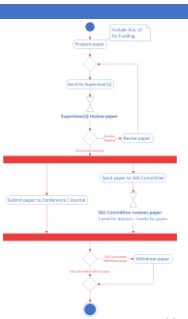
MSCA ETN SAS Network Wide Event 1
Toulouse, 2-5 DECEMBER 2019

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

Agenda

- ESR14 Position (Horiba-Mira): status
- ESR7 Zaid Tahir: no PhD enrollment
- Secondments: any known issues?
- Paper author list + Paper Presubmission Procedure
- ESRs Payments
- Ethics Deliverable
- NWE 2 and 3
- Video
- AoB

Paper Presubmission Procedure



Next NWEs 2 and 3

- **SAS NWE 2 in York** (UK) @ Dept. of Computer Science: 4 days + 1 day Co-Thinking Session
  - Proposed Period: **April/May 2020? -> June 2020?**
  - Final Dates: **June 29 to July 3 2020**
    On Wednesday July 1st and Thursday July 2nd 1,5 day for the plenary meetings
- **SAS NWE 3 in Munich** (GE) @ Fraunhofer: 4 days
  - Proposed Period: **Okt/Nov 2020?**
  - Final Dates: **November 17-20 2020**

Annex 7
Report ESR Researcher Council NWE I Dec 2, 2019

REPORT ESR Researcher Council - MSCA ETN SAS NWE1
December 2nd 2019, LAAS-CNRS, Toulouse (FR)

Date: Monday December 2nd, 2019 12:00-13:00

Present: Raul Ferreira, Yuan Liao, João Zacchi, Dejana Ugrenovic, Aleksandr Ovechkin (president), Luca Sartori, Zaid Tahir, Ahmad Adee (secretary), Hassan Tirmizi, Fang Yan, Vibhu Gautam, Tianlei Miao, Orian Dheu

Excused: Haris Aftab

---

1. Which good practices did you develop in your own research, which might be relevant to other ESRs? What can still be improved?

a) Make notes and comments of your actions especially when you write code just to remember and re-do if needed smth in future.
b) Mind map programs:
   - Docear;
   - Mendley;
   - Zotero.

2. What do you believe has been your personal input into achieving the overall goal of the project up until now?

a) WhatsApp group;
b) Work package group 1 meetings;
c) Dejana's organizational skills.

3. Which activities regarding social media (e.g. Blogging, Twitter, LinkedIn and Facebook) and public engagement did you find successful? How can we further improve this?

Increase the frequency of posts for blogs (2x per year per each ESR, at least 2x per month).

4. Conference, journal and workshop list

A running list containing all the upcoming relevant conference, journal, workshop and summer school should be made (google sheets for example) so as to help ESRs find the relevant opportunities.

This project has received funding from the European Union's
EU Framework Programme for Research and Innovation
Horizon 2020 under Grant Agreement No. 812.788.
https://etn-sas.eu/

Annex 8
PPT Presentation “SAS Mid Term Check – Project Officer”

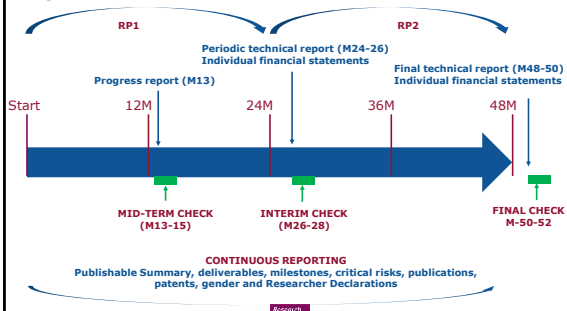
H2020
Marie Skłodowska-Curie Actions
Mid-term check

Nina Poumpalova
812788 - SAS
Toulouse – 2-3 Dec. 2019

Mid-Term check

- Reporting obligations and REA monitoring
- Rights and obligations of fellows and beneficiaries
- Clarification of the eligibility rules
- Cost categories
- Clarification on common misunderstandings
- Where can I get help?

Project timeline



Role of the Coordinator

- Article 41.2b of the GA
  - Monitor that the action is implemented properly
  - Act as intermediary for all communication between consortium and the REA
  - Request and review any document or information required by the REA
  - Submit the deliverables and reports to the REA
  - Ensure that all payments to other beneficiaries are made without unjustified delay
  - Inform the REA of the amounts paid to each beneficiary

Coordinator cannot delegate these tasks to any other beneficiary or subcontract them to a third party

Role of the Beneficiaries

- Article 41.2a of the GA
  - Keep the PP Beneficiary Register up to date
  - Inform the coordinator of events likely to affect the implementation of the project
  - Submit to the coordinator in good time
    - Individual financial statements
    - Data needed to draw up the technical reports
    - Ethics committee opinions/notifications/authorizations for activities raising ethics issues
    - Any other document required by the REA

Beneficiaries are jointly liable for the technical implementation of the action.
Beneficiaries have individual responsibility for their own financial statement.

Obligations of beneficiaries

- Art. 32.1 : Obligations towards recruited researchers

• *inform the researchers about:*
  - the description, conditions, location and the timetable for the implementation of the research training activities under the action and the name of the supervisor
  - ensure that the researchers do not receive, for activities carried out in the frame of the action, other incomes than those received from the beneficiaries
  - ensure that the researchers do not have to bear any costs for the implementation of the action as described in Annex 1
  - host the researchers at their premises
  - provide training and the necessary means for implementing the action
  - ensure that the researchers are adequately supervised
  - ensure that a career development plan is established and support its implementation
  - ensure an appropriate exposure to the non-academic sector

Recruited researchers must NOT be requested to pay visa-related fees or tuition fees for their research training and/or PhD degree programme (e.g. student registration, access to student services (e.g. library, computing), teaching, supervision, examination and graduation) neither from their own funds, nor from the researcher unit cost.

Obligations of beneficiaries

- Art. 32.1 : Obligations towards recruited researchers

- *ensure that the researchers enjoy at the place of the implementation at least the same standards and working conditions as those applicable to local researchers holding a similar position*

- *ensure that the employment contract specifies:*
  - the monthly support for the researcher under this Agreement
  - the obligation of the researcher to work exclusively for the action
  - the arrangements related to the IP rights between the beneficiary and the researcher during implementation of the action and afterwards
  - the obligation of the researcher to ensure the visibility of EU funding in communications or publications and in applications for the protection of results

- *assist the researchers in the administrative procedures related to their recruitment;*
- *ECB's official website for the exchange rate*
  https://www.ecb.europa.eu/euro/exchange/html/index.en.html

Mid-Term check

- Fellow's rights:
  - Administration: Researcher's Declarations, Grant Agreement provisions awareness, working conditions (employment contracts, eligible allowances, visa issues, administrative support), tuition fees
  - Career development plan
  - Supervision and integration: quality of the supervision, integration within the research team/the network/ the host institution/the country
  - Planned training activities, individual research projects, secondments, PhD courses, planned courses, workshops/conferences, language courses and complementary skills training.
  - EID: ESR enrolled in PhD and hosting arrangements should be checked to ensure the 50% inter-sectoral/international secondments)
  - EJD: PhD requirements at each hosting institution, enrolment and recognition of double/joint doctoral degree and hosting arrangements should be checked.
- What's next?
  - Implement any required corrective action
  - Prepare for the next check

Reporting obligations and REA monitoring

Project Officers monitor project. External experts may assist.

✓*Covers technical, legal & administrative aspects*

✓*Technical implementation: project needs to be implemented as described in Annex 1 (Description of the action – DoA) of the Grant Agreement (GA),*

✓*Legal & administrative implementation: the project's activities need to comply with the obligations under the GA.*

✓*In order for the Agency to verify that the project is implemented properly, the beneficiaries must submit any information requested, and in particular the deliverables and reports specified in the GA.*

Reporting obligations and REA monitoring

✓*Continuous reporting (CC): as soon as the GA is signed, the 'continuous reporting' module is available.*

Allows consortium to continuously update publishable summary, deliverables, milestones, etc. and allows the REA to monitor project.

✓ *Periodic reporting: at the end of each reporting period, the coordinator has 60 days to submit a period/final report (Art. 20 of the GA).*

An INTERIM/FINAL CHECK is organized remotely to assess the progress of each reporting period (can be carried out on site if necessary)

Electronic submission via the Participant Portal; electronic signature

Reporting obligations and REA monitoring

- Art. 19.1:
  - The coordinator must:
    - establish a Supervisory Board
    - submit any deliverables identified in Annex 1
    - submit a 'researcher's declaration' within 20 days after the recruitment of each researcher
    - submit a progress report
    - organize a mid-term meeting

Researchers declarations (RDs) contain:
- Personal data (name, date of birth, nationality, gender, family charges, email of researcher, etc.)
- Data related to the project allowances: start date and end date of recruitment/secondment, hosting institution, etc.
- RD is a basis for IFS (Individual financial Statement) and thus need to be regularly updated (particularly before submission of periodic report)

Costs categories summary

1 unit = 1 month of eligible ESR

Researcher			Institution	
Living allowance*	Mobility allowance	Family allowance	Research, training and networking costs	Management and indirect costs
3,270	600	500	1 800	1 200

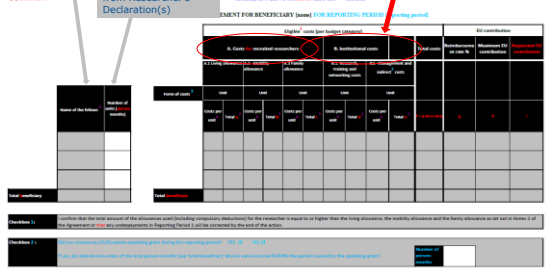
** Multiplied by the country coefficient*

Individual financial statements

Automatically filled in from Researcher's Declaration(s)

Automatically filled in from Researcher's Declaration(s)

Automatically filled in based on unit costs



Clarification on common misunderstandings

Secondment costs:

- additional costs arising from each secondment of 6 months or less which require mobility from the place of residence (e.g. travel and accommodation costs) to be paid from institutional costs (B1)

Open access peer-reviewed publications:

- Each beneficiary must ensure open access (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results (art. 29.2).

In particular, it must:

- (a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;
- (b) ensure open access to the deposited publication —via the repository —at the latest within 6 months of publication

Interim check (Art. 20.3 of the GA)

- **Remote assessment unless otherwise agreed with PO**
  - **Necessary to submit within 60 days of the end of the 1st reporting period:**

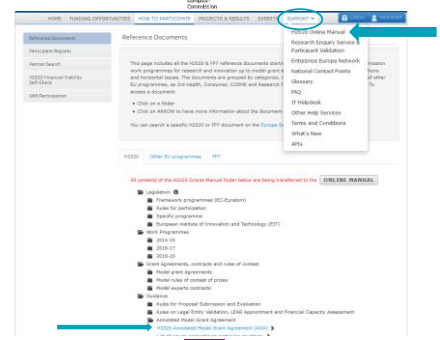
    (1) Periodic technical report
    (2) Periodic financial report (individual financial statement per each beneficiary)

Periodic technical report has 2 parts:

- **Part A (publishable summary, deliverables, milestones, etc., answer to H2020 KPIs) – retrieved from CC**
- **Part B (explanation work carried out, overview of progress, update on deviations from DoA) – uploaded as pdf in Participant portal**

Electronic submission via the Participant Portal; electronic signature

Where are those rules?



Marie Skłodowska-Curie Actions website
https://ec.europa.eu/programmes/horizon2020/en/h2020-section/marie-sklodowska-curie-actions

Documents

- **Annotated Model Grant Agreement**
  http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf
- **Marie Skłodowska-Curie Actions Work Programme 2018-19**
  https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-msca_en.pdf
- **Guide for Applicants ITN 2018**
  http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl-msca-itn_en.pdf

Thank you !

Questions ?

nina.poumpalova@ec.europa.eu

Annex 9
PPT Presentation “Coordinator’s report”

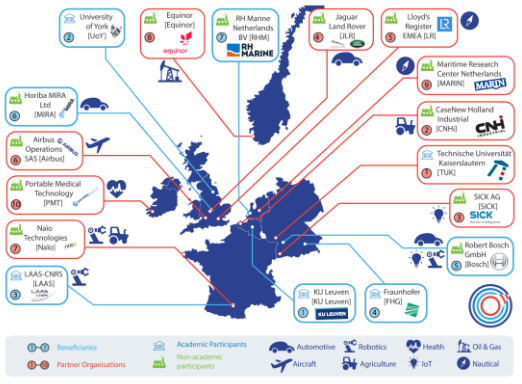
Safer Autonomous Systems

COORDINATOR'S REPORT
NETWORK WIDE EVENT 1
TOULOUSE, 2-5 DECEMBER 2019

Management Support Team

Safer Autonomous Systems

2 SAS Consortium



Safer Autonomous Systems

SAS Consortium - Beneficiaries

4

#	Short Name	Official Name	Country	Partner Type	Host for ESR	ESR Secondments
1	KU Leuven	Katholieke Universiteit Leuven	Belgium	Beneficary, Coordinator	4, 5, 9, 15	12, 14
2	UoY	University of York	United Kingdom	Beneficiary	7, 10, 11, 13	3, 5, 8, 9, 12, 15
3	LAAS	LAAS-CNRS	France	Beneficiary	1, 6	2, 4, 7, 13
4	FHG	Fraunhofer	Germany	Beneficiary	2,3	1, 10
5	Bosch	Robert Bosch GmbH	Germany	Beneficiary	8	2, 3, 4, 11
6	MIRA	Horiba MIRA Ltd	United Kingdom	Beneficiary	14	7, 11
7	RHM	RH Marine Netherlands BV	The Netherlands	Beneficiary	12	9, 14

Safer Autonomous Systems

SAS Consortium – Partner Organisations

5

#	Short Name	Official Name	Country	Partner Type	Host for ESR	ESR Secondments
8	TUK	Technische Universität Kaiserslautern	Germany	Partner Organisation	-	8
9	CNHi	Case New Holland Industrial	Belgium	Partner Organisation	-	5
10	SICK	SICK AG	Germany	Partner Organisation	-	6
11	JLR	Jaguar Land Rover	United Kingdom	Partner Organisation	-	1
12	LR	Lloyd's Register EMEA	United Kingdom	Partner Organisation	-	-
13	Airbus	Airbus Operations SAS	France	Partner Organisation	-	15
14	Naïo	Naïo Technologies	France	Partner Organisation	-	6
15	Equinor	Equinor ASA	Norway	Partner Organisation	-	10
16	MARIN	Maritime Research Center Netherlands	The Netherlands	Partner Organisation	-	-
17	PMT	Portable Medical Technology	Ireland	Partner Organisation	-	13

Safer Autonomous Systems

6 SAS Scientific Objective

Autonomous Systems
A Few Application Areas

7

Autonomous Systems: Question!

8

Are you ready yet, to take a seat on an autonomously controlled airplane?

Would you get on a pilotless plane?

A survey by financial services firm UBS suggests that pilotless aircraft not be too popular, however, with 54% of the 8,000 people questioned saying they would be unlikely to take a pilotless flight. The older age groups were the most resistant with more than half of people aged 45 and above shunning the idea.

Only 17% of those questioned said they would board such a plane, with more young people willing to give them a try and the 25 to 34 age group the most likely to step on board.

One of the biggest debating points around the introduction of the planes is safety.

Uber Accident (March 18, 2018)

9

Uber halts self-driving car tests after death

AFTER UBER'S FATAL CRASH, WILL DRIVERLESS CARS EVER BECOME A REALITY?

Arizona halts Uber self-driving car tests after fatal crash

Fatal Uber crash shows we are poor at supervising driverless cars

The idea that automation improves safety by compensating for human error is false

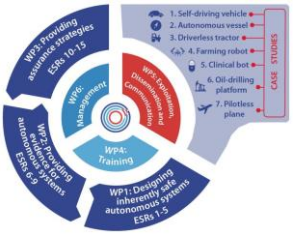
Autonomous Systems: Trust Matters!

10

- If deployed tomorrow, existing self-driving cars could have many few accidents than those driven by humans
- But, that doesn't mean that people are ready to hand-over the steering wheel!
- First accidents with self-driving cars are headline news all over the world!
- Autonomous vehicles, and indeed all autonomous systems, need to be made safe enough so that people trust them!
- SAS S/T Objective = identify ways that we can establish people's trust in autonomous systems by making these systems demonstrably safer

SAS WP Overview

11



WP No:	WP Title
1	Designing inherently safe autonomous systems
2	Providing evidence for autonomous systems
3	Providing assurance strategies
4	Training
5	Exploitation, Dissemination and Communication
6	Management

"The destination, therefore, is clear; the route, however, is a difficult one. The Safer Autonomous Systems ITN project is designed to get us to our destination, safely."

Safer Autonomous Systems

12 SAS General S/T Progress

General S/T Progress

13

- Project has started successfully
- 14 of the 15 ESRs have started their (PhD) research after an initial period of introduction and literature review at their main host
- First secondments going on at the moment

General S/T Progress WP1

14

Objective of WP1: Designing inherently safe autonomous systems
Methodologies and techniques to integrate safety directly into the architecture/design of the autonomous system.

WP1 Designing inherently safe autonomous systems

ESR	Name	Supervisor	Topic of the research	Main S/T activities and/or results and methodology used	Personal training activities
1	Raul Ferreira	LAAS	1.1 Development of a generic framework to monitor and handle safety of autonomous systems during run-time	*Literature review, writing articles for conferences in AI and Safety; *Produced a huge map/body of knowledge regarding "Dependability and security for AI"; *Preparing article to be submitted to the AI Safety conference	*SP as leverage for creating a company *Visa for innovation
2	Yuan Liao	Fraunhofer	1.2 Development of an adaptive platform for resilient autonomous systems based on a MAPE-K cycle	*Research scope and goal has been confirmed and will be focused on two fields, which refer to adaptation engineering and safety engineering;	—
3	Joao Zacchi	Fraunhofer	1.3 Dynamic safety handling of autonomous systems-of-systems with run-time safety contracts	*Literature review regarding the modelling and safety assurance of collective systems, including assurance cases, safety contracts, models@runtime and collision avoidance systems;	—
4	Dejana Ugrenovic	KU Leuven	1.4 Creating Software Design Guidelines and Testing Specifications for Non-Functional Requirements in Safety-critical Autonomous Systems	*Literature review regarding methodologies for fault-tolerant softwares; *Overview of machine learning algorithms for anomaly detection in time-series data; *Building use case and obtaining and preprocessing data for that case	*Managing your PhD; *Research Data Management for PhD students; *Seminar on research integrity; *IP Protection and Valorization; *AI applied in industry: deep learning and anomaly detection
5	Aleksandr Ovechkin	KU Leuven	1.5 Making Connectivity Work Reliably in a diverse Range of Environments	*Two scripts written in Python for each piece of equipment used in experiments to perform the reverberation room characterization; *Performed a series of tests calibrating the equipment	*Managing your PhD

General S/T Progress WP2

15

Objective of WP2: Providing evidence for autonomous systems
Effective model-based system analysis techniques to provide evidence that the behaviour of an autonomous system remains acceptably safe under all conditions.

WP2 Providing evidence for autonomous systems

ESR	Name	Supervisor	Topic of the research	Main S/T activities and/or results and methodology used	Personal training activities
6	Luca Sartori	LAAS	2.1 Virtual worlds generation for testing autonomous robots in simulation	*Bibliographical research; *Learning to code in Python and C++; *Developing generation models and UML diagrams;	*Entrepreneurship for startups and Intellectual Property issues; *Article writing (with Latex)
7	Zaid Tahir	UoYork	2.2 Rigorous Design and Evaluation of Situation Coverage Testing for Autonomous Vehicles	*Literature review on safety assurance of autonomous vehicles; *In the progress of writing a Journal paper regarding the safety assurance of autonomous vehicles;	—
8	Ahmad Adee	Bosch	2.3 Model-based System Analysis Techniques to determine propagation paths of functional insufficiencies in software-intensive systems	*Systematic literature review on Safety of the Intended Functionality (SOTIF); *Argumentation on how SOTIF can be modelled through uncertainty modelling techniques; *Approach proposal so that it can ce presented and challenged within the BOSCH community	*SCRUM hands-on training
9	Hassan Tirmizi	KU Leuven	2.4 Model-based System Analysis of the Robustness of Autonomous Systems against ElectroMagnetic Interference	*Expanding an inhouse built simulation framework for statistical EMI analysis; *Testing the effectiveness of EM diversity when subjected to more real-life disturbances (multiple frequencies)	*Seminar on research integrity; *Managing my PhD; *IP Protection and Valorization

General S/T Progress WP3

16

Objective of WP3: Providing assurance strategies
To develop novel safety assurance strategies which combine the architectural/design measures with the evidence in order to allow us to have trust in the autonomous system.

WP3 Providing assurance strategies

ESR	Name	Supervisor	Topic of the research	Main S/T activities and/or results and methodology used	Personal training activities
10	Fang Yan	UoYork	3.1 From static assurance cases at design-time to executable assurance cases at run-time	*Literature review on the subjects of Assurance cases @runtime, and automation of the assurance case process;	*Academic writing skills; *Functional programming; *DOSA course by University of York
11	Vibhu Gautam	UoYork	3.2 Assurance case structures for machine learning in the decision making of highly autonomous systems	*Literature review of available technological advancement in the area of machine learning focusing on safety and decision making;	*Course on "Foundations of System Safety Engineering" at the University of York
12	Tianlei Miao	RH Marine	3.3 Assuring autonomous sailing from A to B while minimizing operational costs	*Recently started on October 1st, only preliminary literature review	—
13	Haris Aftab	UoYork	3.4 Safety assurance for Clinical Conversational Bots	*Studied research area in abstract way to understand the roles of healthcare, AI, and safety in chatbot applications; *Performed a systematic literature review on clinical chatbot applications in healthcare domain	*Course on "Foundations of System Safety Engineering" at the University of York
14	—	Horiba-MIRA	3.5 Dependability Assurance for Vehicle Autonomy	—	—
15	Orian Dheu	KU Leuven	3.6 Between Safety and Liability: Towards a Liability Allocation Framework for Safe Autonomous Systems	*Researching, selecting and reading relevant scientific literature regarding the SAS objective; *Construct a researchs document library regarding the SAS objective, using the Zotero tool	*Seminar on research integrity; *PhD class on tips and tricks on publication strategy; *IP Protection and Valorization; *Attended 1 Doctoral seminar

Safer Autonomous Systems

17 Training

Training (1)

18

- During the kick-off meeting (M9), the following trainings were given:
  - Open access and open science in scientific research (ESRs)
  - The Supervisor: role & responsibilities (Supervisors)

- The ESRs attended a training on Ethics and integrity in scientific research through conf-call on Oct 18 2019

Training (2)

19

- The ESRs are following research-specific trainings and general (obligatory) trainings organized by their doctoral schools, as well as (international) scientific and soft-skill workshops outside the project
- Network-wide trainings scheduled during the NWE1 (M13):
  - S/T Training: Fault tolerance (JC Fabre, LAAS-CNRS)
  - S/T Training: Dependable autonomous robots (J. Guiochet, LAAS-CNRS)
  - Soft-skill Training I: The keys to manage your doctoral project
  - Soft-skill Training II: Anticipate your career path during your PhD
- 2 secondments ongoing (ESR4, ESR8) / practical planning for first secondments of other ESRs ongoing

Safer Autonomous Systems

20

Recruitment

Recruitment (1)

21

- The 15 PhD positions (Early Stage Researchers) were opened between June 29, 2018 and August 31, 2018.
- The open positions were widely advertised on several channels (Euraxess, SAS project website, Social Media incl. LinkedIn, ResearchGate, job sites).
- >150 candidates (44 different nationalities) applied using the online application tool on the etn-sas.eu website.
- A list of 27 preselected candidates was officially announced on October 1, 2018
- Preselected candidates were invited to the centralized Recruitment Event in Bruges (Nov 27, 2018)
- 6 preselected candidates resigned before the recruiting event. 14 out of the 21 remaining candidates were present in person at the recruiting event and 3 of them (who were not able to participate due to VISA proceedings delay) used the video presentation option

Recruitment (2)

22

Recruitment (3)

23

- During 3 parallel sessions, the 14 candidates presented themselves, their background and their motivation.
- Video interviews of candidates following alternative procedure were shown
- A time slot of 45 minutes has been allocated for each candidate for the presentation and for the jury members to interview the candidates. Then each Jury Group had a 45 minutes deliberation meeting to assess the suitability of each candidate for the ESR position they applied for.
- Another one-hour plenary deliberation meeting took place with all Jury Groups members and the management team.

Recruitment (4)

24

- A final decision on the selection of 10 candidates was agreed during the final deliberation meeting on Nov 27, 2018
- The official list of ESRs proposed for recruitment was officially communicated by email on Nov 29, 2018
- Decision for the 4 ESR positions with the University of York as main host had to be postponed to mid December 2018 in order to also comply with the internal University of York recruitment policy
  - Additional advertisement for York's 4 ESR positions on its own website, Euraxess and via jobs.ac.uk
- On Dec 10, 2018 the decision on ESR7, ESR10, ESR11 and ESR13 was made

Recruitment (5)

25

- Two of the original selected SAS candidates (ESR4 and ESR12) were not withheld for the specific SAS positions because they didn't fulfill the rules set forward by the KU Leuven Arenberg Doctoral School to start with their PhD. The two candidates were replaced by two other suitable candidates after conducting a similar recruitment process
- The ESR5 Position remained open after the Recruitment Event. A suitable candidate was found following the same organization and structure as the interviews on the recruitment event itself
- The selected candidate for the ESR14 Position withdrew his application due to private reasons (September 12, 2019). Therefore, on October 10, 2019 the SAS ESR14 position has been re-opened on Euraxess, Horiba-Mira jobsite, SAS project website and disseminated through SAS social media (LinkedIn and Twitter)

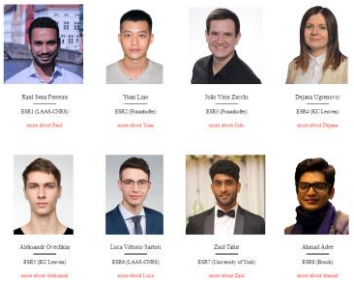
Recruitment (6)

26

[MSCA ETN SAS] EARLY STAGE RESEARCHERS						
ESR	First Name	Last Name	Gender	Country of origin	Affiliation	Start date '19
1	Raul Sena	Ferreira	Male	Brazil	LAAS-CNRS	Mar/1
2	Yuan	Liao	Male	China	Fraunhofer ESK	July/1
3	Joao Vitor	Zacchi	Male	Brazil	Fraunhofer ESK	April/15
4	Dejana	Ugrenovic	Female	Bosnia and Herzegovina	KU Leuven	May/10
5	Aleksandr	Ovechkin	Male	Russia	KU Leuven	June/19
6	Luca Vittorio	Sartori	Male	Italy	LAAS-CNRS	Mar/1
7	Zaid	Tahir	Male	Pakistan	University of York	May/1
8	Ahmad	Adee	Male	Pakistan	Bosch	Feb/15
9	Hassan	Tirmizi	Male	Pakistan	KU Leuven	Mar/19
10	Fang	Yan	Female	China	University of York	June/18
11	Vibhu	Gautam	Male	India	University of York	May/1
12	Tianlei	Miao	Male	China	RH Marine	Oct/1
13	Haris	Aftab	Male	Pakistan	University of York	July/1
14	---	---	---	---	Horiba-MIRA	---
15	Orian	Dheu	Male	France	KU Leuven	Feb/1

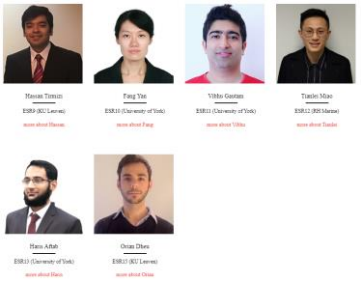
SAS ESRs (14/15)

27



SAS ESRs (14/15)

28



SAS Supervisory Committees (1/2)

29

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR1	R. S. Ferreira (Brazil) (m)	LAAS	J. Guiochet (LAAS), H. Waeselynck (LAAS)	M. Trapp (FHG), H. Joshi (JLR)
ESR2	Y. Liao (China) (m)	FHG	M. Trapp (FHG)	J.C. Fabre (LAAS), R. Gansch (Bosch)
ESR3	J. V. Zacchi (Brazil) (m)	FHG	M. Trapp (FHG)	I. Habli (UoY), R. Gansch (Bosch)
ESR4	D. Ugrenovic (Bosnia-Herzegovina) (f)	KU Leuven	J. Boydens (KU Leuven), T. Holvoet (KU Leuven)	P. Munk (Bosch), P. Hellinckx (UAntwerpen)
ESR5	A. Ovechkin (Russia) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	E. el Amam (RH Marine), John Dawson (UoY)
ESR6	L.V. Sartori (Italy) (m)	LAAS	H. Waeselynck (LAAS), J. Guiochet (LAAS)	R. Alexander (UoY), M. Albert (Sick)
ESR7	Z. Tahir (Pakistan) (m)	UoY	R. Alexander (UoY)	H. Woeselynck (LAAS), D. Ward (Horiba-Mira)
ESR8	A. Adee (Pakistan) (m)	Bosch	P. Liggesmeyer (TUK), P. Munk (Bosch)	J. Boydens (KU Leuven)

SAS Supervisory Committees (2/2)

30

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR9	H. Tirmizi (Pakistan) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	A. Ruddle (Horiba-Mira), F. Leroux (KU Leuven)
ESR10	F. Yan (China) (f)	UoY	S. Foster (UoY), I. Habli (UoY)	J. Guiochet (LAAS), E. Landre (Equinor)
ESR11	V. Gautam (India) (m)	UoY	R. Alexander (UoY), R. Hawkins (UoY)	R. Gansch (Bosch)
ESR12	T. Miao (China)(m)	RH Marine	D. Pissoort (KU Leuven), P. Slaets (KU Leuven)	E. el Amam (RH Marine), J. McDermid (UoY)
ESR13	H. Aftab (Pakistan)(m)	UoY	I. Habli (UoY)	J. Guiochet (LAAS), E. O'Caroll (PMT)
ESR14	---	Horiba-Mira	M. Nicholson (UoY), J. McDermid (UoY), A. Ruddle (Horiba-Mira)	D. Pissoort (KU Leuven)
ESR15	O. Dheu (France) (m)	KU Leuven	P. Valcke (KU Leuven)	P. Ringeard (Airbus), D. Pissoort (KU Leuven)

PCDP

31

- All recruited ESRs developed, in dialogue with their supervisors, a Personal Career Development Plan (PCDP).
- 11 signed PCDPs have been uploaded to the participants portal (D4.2 PCDP Report) on Sept 19 2019.
- Signed PCDPs for ESR7, ESR11 and ESR12 have been sent to the SAS project manager and will be added the already submitted Deliverable D4.2 PCDP Report after approval by the Project Officer.
- During SAS NWEs, PCDP progress sessions will be organised (ESRs & SAS Training Coordinator).

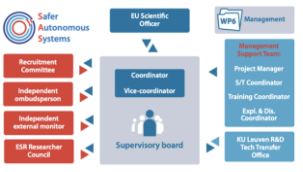
Safer Autonomous Systems

32

Project Management

Project Management (1)

33



Management Support Team:

- Coordinator: D. Pissoort
- Vice-Coordinator: J. Boydens
- Project Manager: S. Stroobant
- S/T Coordinator: D. Vanoost
- Training Coordinator: J. Guiochet
- Expl. & Dis. Coordinator: A. Ruddle
- TTO: L. Lanneau
- Ombudsperson: T. Dhaese
- External monitor: P. McGuiness

Project Management (2)

34

- In April 2019, S. Stroobant started as a dedicated project manager (for ETN SAS and ETN PETER)
- The general coordinator, vice-coordinator, S/T coordinator and project manager meet at least monthly to discuss possible urgent matters.
- The full Management Support Team meets physically at least every six months, typically at the SAS Network Wide Events
- In these team meetings, a full overview of the project is discussed and attention is given to the S/T, training, secondments, milestones, deliverables, upcoming Network-Wide Events

Project Management (3)

35

- NWEs every 6 months. Typical agenda for NWEs:

Day	Event	Who is involved
1	**am:** Presentations ESRs 1–7 **pm:** Presentations ESRs 8–15	ESRs, Supervisors, Beneficiaries, Partner Organizations, plus members of the Management Team (MT)[17]
	am: WP leaders meeting // ESR Researchers Council[18] meeting	WP Leaders, Coordinator, MT // 15 ESRs
	pm: Supervisory Board (SB) meeting	SB members
2	**am:** Training meeting to discuss matters arising from training and secondments	Training Coordinator, WP Leaders, Coordinator, Project Manager,
	pm: Laboratory/Factory visits for ESRs	All ESRs + Supervisors (optional)
	eve: Official Project Dinner + Guest Lecture by invited expert	All
3+4	**am + pm:** S/T training and Soft-skills training	All ESRs + Supervisors (optional)
5	**am+pm:** *SAS Co-Thinking Sessions (only for NWEs 2, 4 and 7)*	*All ESRs + Supervisors (optional) + representatives from industry*

17 Management Team includes Project Manager, S/T Coordinator, and Exploitation & Dissemination Coordinator (see Section 3.2.1. and Figure 4)
18 ESR Researcher Council (see Section 3.2.1. and Figure 4), includes the 15 ESRs and meets during the workshops at the same time as the WP Leaders meeting. The ESRs discuss issues relevant to them and communicate with the SB during the meeting in the afternoon through an annually elected representative.

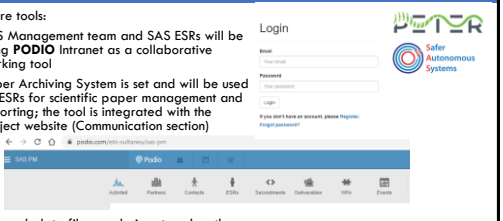
- In between NWEs:
  - conference calls for WP1-3 (S/T coordinator, WP leaders, supervisors, ESRs, Project Manager)

Project Management (4)

36

Software tools:

- SAS Management team and SAS ESRs will be using **PODIO** Intranet as a collaborative working tool
- Paper Archiving System is set and will be used by ESRs for scientific paper management and reporting; the tool is integrated with the project website (Communication section)



- Research data files are being stored on the servers of each institution, in accordance with the Data Management Plan.

Supervisory Board

37

- The Supervisory Board (SB) established by the SAS network is the ultimate decision-making body of the consortium.
- The SB evaluates the scientific and technical progress of the research and training activities and to refine the plans accordingly.

Group 1 (1 vote per beneficiary):
- D. Pissoort (PC, KU Leuven)
- J. Boydens (VC, KU Leuven)
- D. Vanoost (S/T C, KU Leuven)
- One representative from each Project Beneficiary:
  - P. Veicke (KU Leuven)
  - I. Habli (University of York)
  - J. Guiochet (LAAS-CNRS)
  - M. Trapp (Fraunhofer-ESK)
  - P. Munk (Bosch)
  - A. Ruddle (HORIBA-Mira)
  - E. el Amam (RH Marine)

Group 2 (no formal voting rights):
- S. Stroobant (PM, KU Leuven)
- One representative from each Partner Organisation:
  - P. Liggesmeyer (TU Kaiserlautern)
  - P. Snauwaert (CNHi)
  - M. Albert (Sick)
  - H. Joshi (Jaguar Land Rover)
  - R. Bridgeman (Lloyd's Register)
  - E. Landre (Equinor)
  - G. Severac (Naio)
  - P. Ringeard (Airbus)
  - J.H. de Jong (Marin)
  - E. O'Caroll (PMT)
- **Luca Sartori** as the ESR representative

Safer Autonomous Systems

38

Communication and Dissemination

SAS Website

39

- New SAS-website since Sept 1 2019 (temporary website was available between June 27 2018 and Sep 1 2019)

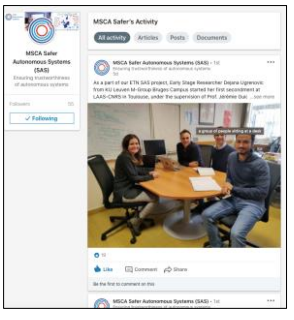
SAS Blogs, Social Media,…

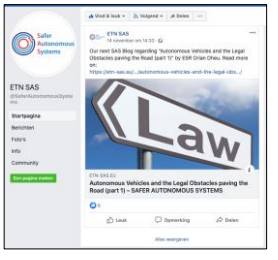
40

- ESRs are actively involved in communication and dissemination activities.

Facebook	Twitter	LinkedIn	Blogging
Zaid Tahir (York)	Yuan Liao (Fraunhofer)	Joao Vitor Zacchi (Fraunhofer)	Joao Vitor Zacchi (Fraunhofer)
Dejana Ugrenovic (KU Leuven)		Hassan Tirmizi (KU Leuven)	Ahmad Adee (Bosch)
			Orian Dheu (KU Leuven)

- So far, the ESRs have written and published 5 blog posts presenting their work for the general public
- They have published several posts on Social Media (on SAS Facebook, Twitter & LinkedIn channels)





SAS Video

43

- A SAS Promo Video will be developed and published during the second year of the SAS Project
- This video will explain the project goals, and present the team and the collaborating partners.
- This video will be made in collaboration with Storyrunner. They are very acquainted with developing Marie Curie/Best Practice Award Winning Videos in collaboration with KU Leuven

SAS ESRs at Conferences

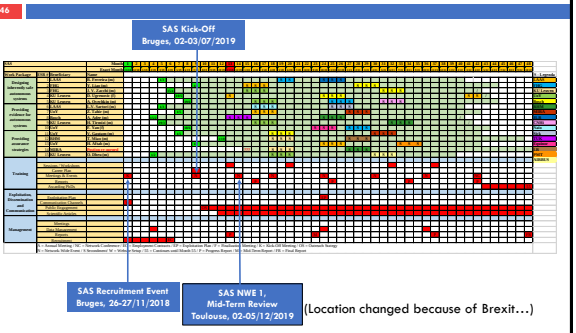
44

Safer Autonomous Systems

45 Deliverables & Milestones

SAS Gantt Chart (M1 = Nov 2018)

46



Researcher Declarations

47

All 14 Researcher Declarations have been submitted

Researcher Declaration

No	Fellow!	First Name	Last Name	Status	Recruitment Organisation	Start Date	End Date	Working Time Commitment	Duration
1	1	Ahmad	Adee	SUBMITTED	Robert Bosch GmbH	15-02-2019	14-02-2022	Full Time	36
2	2	Orian	Dheu	SUBMITTED	Katholieke Universiteit Leuven	01-02-2019	31-01-2022	Full Time	36
3	3	Luca	Vittorio Sartori	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
4	4	Raul	Sena Ferreira	SUBMITTED	Centre National De La Recherche Scientifique Cnrs	01-03-2019	28-02-2022	Full Time	36
5	5	Hassan	Tirmizi	SUBMITTED	Katholieke Universiteit Leuven	19-03-2019	18-03-2022	Full Time	36
6	6	Vibhu	Gautam	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
7	7	Zaid	Tahir	SUBMITTED	University Of York	01-05-2019	30-04-2022	Full Time	36
8	8	Dejana	Ugrenovic	SUBMITTED	Katholieke Universiteit Leuven	10-05-2019	09-05-2022	Full Time	36
9	9	Joao Vitor	Zacchi	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	15-04-2019	14-04-2022	Full Time	36
10	10	Yuan	Liao	SUBMITTED	Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V.	01-07-2019	30-06-2022	Full Time	36
11	11	Fang	Yan	SUBMITTED	University Of York	18-06-2019	17-06-2022	Full Time	36
12	12	Aleksandr	Dvechkin	SUBMITTED	Katholieke Universiteit Leuven	19-06-2019	18-06-2022	Full Time	36
13	13	Haris	Alhaki	SUBMITTED	University Of York	01-07-2019	30-06-2022	Full Time	36
14	14	Tianlei	Miao	SUBMITTED	Rh Marine Netherlands Bv	01-10-2019	30-09-2022	Full Time	36

Deliverables

48

Safer Autonomous Systems

Milestones

49

Number	Name	Lead Beneficiary	Delivery Date (Annex I)	Achieved	Delivery Date (actual)	Comments
2	Start-up HT meeting	KU Leuven	30 Nov 2018	✓	27 nov 2018	Was held in Bruges at the end of the SAS Recruitment Event
1	Internal and external communication	KU Leuven	30 Nov 2018	✓	16 apr 2019	See deliverable D6.1
5	SAS Kick-Off meeting	KU Leuven	31 May 2019	✓	03 Jul 2019	Was held on July 2-3 2019 at Crowne Plaza in Bruges, Belgium
6	Personal Career Development Plans	AIRA	31 Jul 2019			
3	Planned recruitments completed	KU Leuven	31 Oct 2019			ESR14 (Nordia-Mira) Position is open
4	All recruited fellows enrolled in PhD pr	CMRS	31 Oct 2019			
7	1st Annual SB meeting	KU Leuven	31 Oct 2019			The 1st Annual SB meeting will be held at the First SAS MVE on December 2nd 2019 at LAAS-CNRS (Toulouse).
16	Documented set of vehicle use cases fo	UY	31 Oct 2019			
17	Review of relevant techniques from fur	AIRA	31 Oct 2019			
11	SAS Network Wide Event I	UY	30 Nov 2019			SAS MVE 1 is held at CNRS-LAAS due to Brexit issues
18	Different safety assurance frameworks	CMRS	30 Nov 2019			
19	Decision on which vitreless communical	KU Leuven	30 Nov 2019			
21	First experiment of virtual world gener	CMRS	30 Nov 2019			
35	Project mid-term check at month 13-17	KU Leuven	30 Nov 2019			
20	Decision on which model-based system	Bosch	30 Nov 2019	✓	27 nov 2019	

Safer Autonomous Systems

50

Questions or Remarks?

Annex 10
PPT Template “ESR Pitch Presentation”

Safer Autonomous Systems

MY NAME (MY AFFILIATION)

MSCA-ETN SAS Network Wide Event I
December 2-3 2019, LAAS-CNRS TOULOUSE - FRANCE

Instructions for your ESR presentation at Toulouse

2

- **1: slide** – background – (where do you come from, studies)
- **2 – 4: slides** on your research – objective – methodology used – results (so far)
- **5: slide(s)** regarding your training (if you have followed the same wide training events, they do not have to repeat it as it will be already presented by the Coordinator earlier on, but rather trainings you attended which were tailor made for your specific research)
- **6: slide(s)** regarding dissemination / communication / outreach activities / conference attendance (this applies also as for the training) / secondments (if applicable)
- **7:** your expectations with regard to your future career as MSCA fellow
- **You should speak for about 5-7 min and have a minute for questions.**

Bio data + professional background

3

- **One Slide**

My ESR(x) project (title)

4

- Describe your research – objective – methodology – results (so far)

Training

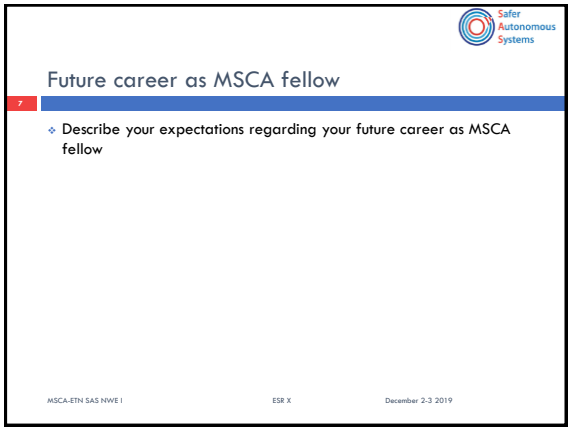
5

- Describe trainings you attended which were tailor made for your specific research
- No need to mention here the training at SAS Kick-Off and the training regarding Ethics and Integrity

Dissemination – communication - outreach

6

- Describe your outreach activities
- Conference attendance
- Secondment(s) (if applicable)


Safer
Autonomous
Systems
Future career as MSCA fellow
7
Describe your expectations regarding your future career as MSCA fellow
MSCA-ETN SAS NWE I
ESR X
December 2-3 2019

Annex 11
PPT Presentation “Conclusions of the meeting + next steps”

Safer Autonomous Systems

CONCLUSIONS OF THE MEETING
PROJECT NEXT STEPS

MSCA-ETN SAS Network Wide Event 1
2-3 December 2019, LAAS-CNRS, Toulouse - FRANCE

Safer Autonomous Systems

2

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

Safer Autonomous Systems

WP1-3 Parallel Sessions

3

- Actions + outcome of the sessions: send to the PM
- S/T Coordinator Dries Vanoost will follow up
  - Through short Skype meetings:
    - Progress in research
    - Deliverables and milestones
    - Possible collaboration,
  - Dates will be set by a doodle to the ESRs
  - (Co-)Supervisor will be kindly invited
- 3-monthly meetings through Skype, starting in February 2020: all ESRs within each WP + the WP leader

---

Safer Autonomous Systems

MID-TERM MEETING WITH PO NINA

4

- ESRs presentations went well, thanks to all the ESRs
- All ESRs are on track, keep up the good work in your research the next coming years
- Project is running well as it goes, positive reactions regarding the implementation of the project

---

Safer Autonomous Systems

SUPERVISORY COMMITTEES

5

- The changes in the supervisory committees need to be justified towards the EC with justification, motivation + also the respective CV's of the new supervisory committee members
- Request for information will be sent out by PM next week
- Send everything regarding these changes/modifications to the PM **asap**
- Formal notifications are necessary through the EC Participant Portal so this is urgent

---

Safer Autonomous Systems

SUPERVISORY COMMITTEES
Stated in the SAS Proposal

6

ESR	Host	Academic supervisor 1	Academic supervisor 2	Industrial supervisor	Combined 6 years of supervision experience[1]	Combined 6 of completed and running PhDs[2]
1	LAAS (FR)	**Prof. J. Guiochet (LAAS, FR)**	Dr. M. Trapp (FHG, GE)	Dr. P. Barber (JLR, UK)	23	15
2	FHG (GE)	**Dr. M. Trapp (FHG, GE)**	Prof. J.C. Fabre (LAAS, FR)	Dr. S. Burton (Bosch, GE)	39	37
3	FHG (GE)	**Dr. M. Trapp (FHG, GE)**	Prof. T. Kelly (UoY, UK)	Dr. S. Burton (Bosch, GE)	28	26
4	KU Leuven (BE)	**Prof. J. Boydens (KU Leuven, BE)**	Prof. E. Steegmans (KU Leuven, BE)	Dr. P. Munk (Bosch, GE)	28	19
5	KU Leuven (BE)	**Prof. D. Pissoort (KU Leuven, BE)**	Prof. G. Vandenbosch (KU Leuven, BE)	J.K. van der Ven (RHM, NL)	34	60
6	LAAS (FR)	**Prof. H. Waeselynck (LAAS, FR)**	Dr. R. Alexander (UoY, UK)	Dr. M. Albert (Sick, GE)	28	22
7	UoY (UK)	**Dr. R. Alexander (UoY, UK)**	Prof. H. Waeselynck (LAAS, FR)	Dr. D. Ward (MIRA, UK)	28	22
8	Bosch (GE)	Prof. P. Liggesmeyer (TUK, GE)	Prof. J. Boydens (KU Leuven, BE)	**Dr. P. Munk (Bosch, GE)**	19	45
9	KU Leuven (BE)	**Prof. D. Pissoort (KU Leuven, BE)**	Prof. G. Vandenbosch (KU Leuven, BE)	Dr. A. Ruddle (MIRA, UK)	34	60
10	UoY (UK)	**Prof. T. Kelly (UoY, UK)**	Prof. J. Guiochet (LAAS, FR)	Dr. E. Landre (Statoil, NO)	31	27
11	UoY (UK)	**Prof. T. Kelly (UoY, UK)**	Dr. R. Alexander (UoY, UK)	Dr. S. Burton (Bosch, GE)	25	26
12	RHM (NL)	Prof. T. Kelly (UoY, UK)	Prof. J. Boydens (KU Leuven, BE)	**J.K. van der Ven (RHM, NL)**	26	24
13	UoY (UK)	**Dr. I. Habli (UoY, UK)**	Prof. J. Guiochet (LAAS, FR)	E. O'Caroll (PMT, IE)	20	19
14	MIRA (UK)	Prof. T. Kelly (UoY, UK)	Prof. D. Pissoort (KU Leuven, BE)	**Dr. A. Ruddle (MIRA, UK)**	26	27
15	KU Leuven (BE)	**Prof. P. Valcke (KU Leuven, BE)**	Prof. D. Pissoort (KU Leuven, BE)	A. Taillard (Airbus, FR)	22	23

SAS Supervisory Committees
Since the start of the Project (Nov 1 2018)

7

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR1	R. S. Ferreira (Brazil) (m)	LAAS	J. Guiochet (LAAS), H. Waeselynck (LAAS)	M. Trapp (FHG), H. Joshi (JLR)
ESR2	Y. Liao (China) (m)	FHG	M. Trapp (FHG)	J.C. Fabre (LAAS), R. Gansch (Bosch)
ESR3	J. V. Zacchi (Brazil) (m)	FHG	M. Trapp (FHG)	I. Habli (UoY), R. Gansch (Bosch)
ESR4	D. Ugrenovic (Bosnia-Herzegovina) (f)	KU Leuven	J. Boydens (KU Leuven), T. Holvoet (KU Leuven)	P. Munk (Bosch), P. Hellinckx (UAntwerpen)
ESR5	A. Ovechkin (Russia) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	E. el Amam (RH Marine), John Dawson (UoY)
ESR6	L.V. Sartori (Italy) (m)	LAAS	H. Waeselynck (LAAS), J. Guiochet (LAAS)	R. Alexander (UoY), M. Albert (Sick)
ESR7	Z. Tahir (Pakistan) (m)	UoY	R. Alexander (UoY)	H. Waeselynck (LAAS), D. Ward (Horiba-Mira)
ESR8	A. Adee (Pakistan) (m)	Bosch	P. Liggesmeyer (TUK), P. Munk (Bosch)	J. Boydens (KU Leuven)

SAS Supervisory Committees
Since the start of the Project (Nov 1 2018)

8

ESR	Candidate	Host	Supervisors	Assessors/Mentors
ESR9	H. Tirmizi (Pakistan) (m)	KU Leuven	D. Pissoort (KU Leuven), G. Vandenbosch (KU Leuven), D. Vanoost (KU Leuven)	A. Ruddle (Horiba-Mira), P. Leroux (KU Leuven)
ESR10	F. Yan (China) (f)	UoY	S. Foster (UoY), I. Habli (UoY)	J. Guiochet (LAAS), E. Landre (Equinor)
ESR11	V. Gautam (India) (m)	UoY	R. Alexander (UoY), R. Hawkins (UoY)	R. Gansch (Bosch)
ESR12	T. Miao (China)(m)	RH Marine	D. Pissoort (KU Leuven), P. Slaets (KU Leuven)	E. el Amam (RH Marine), J. McDermid (UoY)
ESR13	H. Aftab (Pakistan)(m)	UoY	I. Habli (UoY)	J. Guiochet (LAAS), E. O'Caroll (PMT)
ESR14	---	Horiba-Mira	M. Nicholson (UoY), J. McDermid (UoY), A. Ruddle (Horiba-Mira)	D. Pissoort (KU Leuven)
ESR15	O. Dheu (France) (m)	KU Leuven	P. Valcke (KU Leuven)	P. Ringeard (Airbus), D. Pissoort (KU Leuven)

DELIVERABLES AND MILESTONES

9

- Deviaton of Deliverables and milestones: more detailed information is needed why delayed, specify due dates, clarification why and how. MITIGATION PLAN >>> ACTION PLAN
- Based on WP parallel sessions
- Formal notifications regarding these changes are necessary through the EC Participant Portal in order to further align with the Action Plan as stated in the SAS Proposal

SOME IMPORTANT AND URGENT HOMEWORK…

10

- ESR14: Horiba-Mira > Recruitment Update
- Horiba-Mira: Letter of Commitment with University of Coventry
- Fraunhofer: Letter of Commitment with TU Munich
- University of Toulouse: Letter of Commitment
- Templates will be sent out by the PM
- Please send the respective signed LoCs asap to the PM who needs to upload all these to the EC

REPORT NWE + ACTION ITEMS

11

- NWE Report + Action items will be sent out to all SAS Consortium members
- Please follow up the action items

PCDP

12

- All recruited ESRs developed, in dialogue with their supervisors, a Personal Career Development Plan (PCDP).
- Progress reports of the PCDPs to Supervisory Board are a 6 monthly recurring Deliverable.
- So new updated PCDPs are foreseen at our NWE in York

First Secondments (1)

13

[MSCA ETN SAS] EARLY STAGE RESEARCHERS						
ESR	First Name	Last Name	Affiliation	1st Secondment Location	1st Secondment Period	1st Secondment Local Mentor
1	Raul Sena	Ferreira	LAAS-CNRS	Fraunhofer	May - June 2020 (2m)	M. Trapp
2	Yuan	Liao	Fraunhofer ESK	LAAS-CNRS	Jan - Mar 2020 (3m)	J.C. Fabre
3	Joao Vitor	Zacchi	Fraunhofer ESK	University of York	Jan - Mar 2020 (3m)	I. Habli
4	Dejana	Ugrenovic	KU Leuven	LAAS-CNRS	Nov - Dec 2019 (5w)	J. Guiochet
5	Aleksandr	Ovechkin	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
6	Luca Vittorio	Sartori	LAAS-CNRS	Naio	Feb - April 2020 (3m)	G. Severac
7	Zaid	Tahir	University of York	LAAS-CNRS	Feb - April 2020 (3m)	H. Waeselynck
8	Ahmad	Adee	Bosch	TUK	Nov 2019 - Jan 2020 (3m)	P. Liggesmeyer
9	Hassan	Tirmizi	KU Leuven	University of York	Feb - April 2020 (3m)	J. Dawson
10	Fang	Yan	University of York	Equinor	Sep - Nov 2020 (3m)	E. Landre
11	Vibhu	Gautam	University of York	Bosch	April - June 2020 (3m)	R. Gansch
12	Tianlei	Miao	RH Marine	KU Leuven	April - June 2020 (3m)	D. Pissoort
13	Haris	Aftab	University of York	LAAS-CNRS	Oct - Dec 2020 (3m)	J. Guiochet
14	---	---	Horiba-MIRA	KU Leuven	April - June 2020 (3m)	J. Boydens
15	Orian	Dheu	KU Leuven	University of York	April - June 2020 (3m)	R. Alexander

First Secondments (2)

14

- Modifications (schedule changes, topic, location) can only be performed after PREVIOUS APPROVAL and on request and should be communicated with the PM who reports this to the PO !!
- Check if ESR's nationalities cause issues for the foreseen secondments and if specific procedures need to be followed
- Align the secondment timings with the institutions hosting secondments
- Confirm the modifications to the PM

First Secondments (3)

15

- After each Secondment a Secondment Report needs to be written by the ESR, and signed by the ESR and the Secondment Hosting Supervisor.
  Template will be send out by Stephane.
- **IMPORTANT**
  The Actual Secondment Period needs to be submitted at the H2020 Participant Portal (under the Tab 'Researchers') as soon as the Secondment has ended, so not sooner!

Ethics

16

- EC required us to write a dedicated deliverable on ethical issues and potential dual use related to autonomous systems
- Deliverable written through collaboration between KU Leuven and Univ. of York
- Voluntary ethical self-assessment by every ESR
- Ethical Board:
  - KU Leuven: Prof. A. Vedder, Dr. D. Vanoost
  - UoY: Dr. I. Habli

SAS Project Visual Identity

17

EU funding acknowledgement

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No. 812.788

SAS Video

18

- A SAS Promo Video will be developed and published during the second year of the SAS Project
- This video will explain the project goals, and present the team and the collaborating partners.
- This video will be made in collaboration with Storyrunner. They are very acquainted with developing Marie Curie/Best Practice Award Winning Videos in collaboration with KU Leuven
- Development of the video is foreseen Feb-April 2020

Travel costs of the Partner Organizations

19

- Travel costs related to Project meetings and events will reimbursed by the Beneficiary organizing the meeting or event (SAS C.A. [7.1.1.3]):
  - Subject to specific rules, limitations and processes of the Beneficiary who is reimbursing these costs
  - Proof of costs needed!
  - Up to a **maximum** amount > 2 cost categories for each event:
    - Max 400 euros for travel costs
    - Max 150 euros/day for hotel and catering costs
  - For maximum 1 participant per Partner Organization per event
- Please contact PM regarding the reimbursements

Next NWEs 2 and 3

20

- **SAS NWE 2 in York** (UK) @ Dept. of Computer Science: 4 days + 1 day Co-Thinking Session
  - Final Dates: **June 29 to July 3 2020**
    On Wednesday July 1st and Thursday July 2nd 1,5 day for the plenary meetings
- **SAS NWE 3 in Munich** (GE) @ Fraunhofer: 4 days
  - Final Dates: **November 17-20 2020**
- **More information will follow**
- **Letters of invitation can be asked from today on**

ITN Coordinator's Day Brussels

21

- H2020 MSCA ITN 2019 Coordinators' Info Day took place in Brussels on November 22 2019.
- Very useful information (e.g. Recruitment, Reporting, Open Access,…) regarding the implementation of ITN projects
- **Presentations and videos on:**

https://ec.europa.eu/info/itn-2019-coordinators-info-day_en

SSC MARCH 16-20 2020 BRUGES

22

Introduction to system safety engineering and management 2020
A five-day primer in system safety engineering - In collaboration with the University of York (UK).

SSC MARCH 16-20 2020 BRUGES

23

https://iiw.kuleuven.be/brugge/m-group/Events/ssc2020

24

Special thanks to Raul, Luca, Dejana, Jérémie and Hélène for organizing this Network Wide Event here at LAAS-CNRS in Toulouse

Safer Autonomous Systems

25

THANK YOU ALL FOR ATTENDING THIS IMPORTANT NWE AND MID-TERM REVIEW MEETING AND ALREADY LOOKING FORWARD TO SEEING YOU ALL IN YORK AT OUR SECOND NWE

Annex 12
SAS NWE I Survey Form

MSCA ETN SAS NWE 1 @LAAS-CNRS Toulouse – Survey Form

Please fill out the survey form for the first two days of the MSCA ETN SAS NWE 1 at LAAS-CNRS in Toulouse, which took place on December 02 and December 03, 2019.

Regarding the scores: 1 = Poor, 5 = Excellent

Monday December 2 2019

How satisfied were you with the provided progress report? *

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

How satisfied were you with the WP parallel sessions? *

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

How satisfied were you with the Individual ERS presentations? *

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Comments or Notes regarding the sessions on Monday December 2 2019

This project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No 812788

RECENT POSTS

SAS @ Safety-Critical Systems Symposium 2020
15 days ago

Network Wide Event in Toulouse: behind the scenes
25 days ago

The Challenge of Managing a PhD
January 27, 2020

Leuven AI Law & Ethics Conference (LAILEC)
January 17, 2020

My First International Conference: ISSRE 2019
December 20, 2019