

Implementation of Memorandum of Understanding between ASECAP and GSA

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A bit of history...

- ✓ EGNOS is operational and delivering a stable, quality service

2010:

First time GSA
at ASECAP days

- ✓ First Galileo launch
- ✓ EGNOS certified for civil aviation

2011:

Memorandum of
Understanding

- ✓ 4 operational Galileo satellites

2012:

Roadmap with
5 actions

2013:

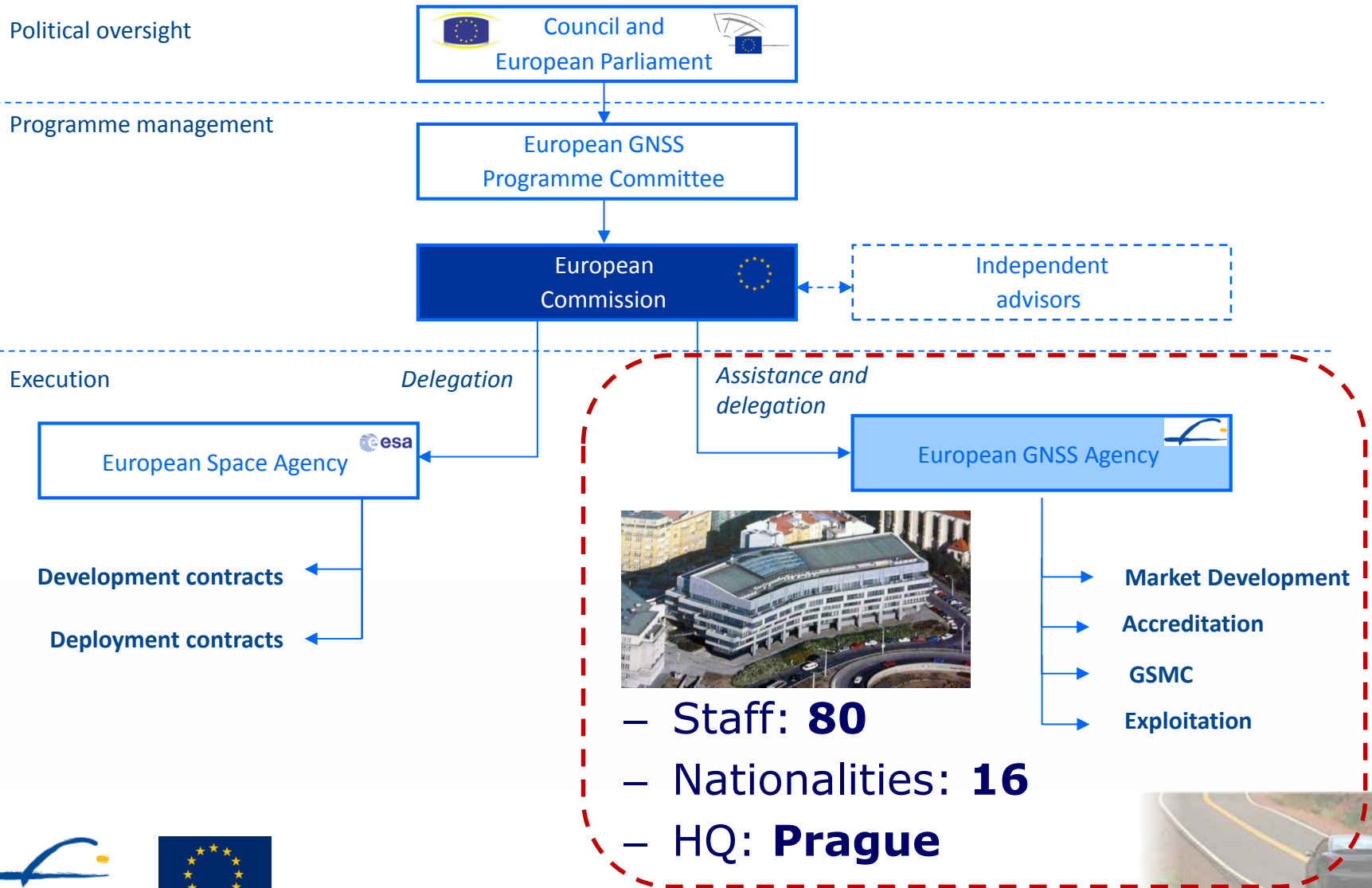
Task force for
implementation

- ✓ Second GNSS-based tolling system operational (Skytoll Slovakia)

- ✓ Fourth GNSS-based tolling scheme announced (Belgium)

- ✓ Third GNSS-based tolling system starts (Ecomuv France)

Who is the GSA?



What is the Galileo?

30 satellites in Medium Earth Orbit (MEO)



Altitude: 23 222 km

Period: 14 hours 22 minutes

3 orbital planes inclined at 56° to the Equator

2 spare satellites in each plane

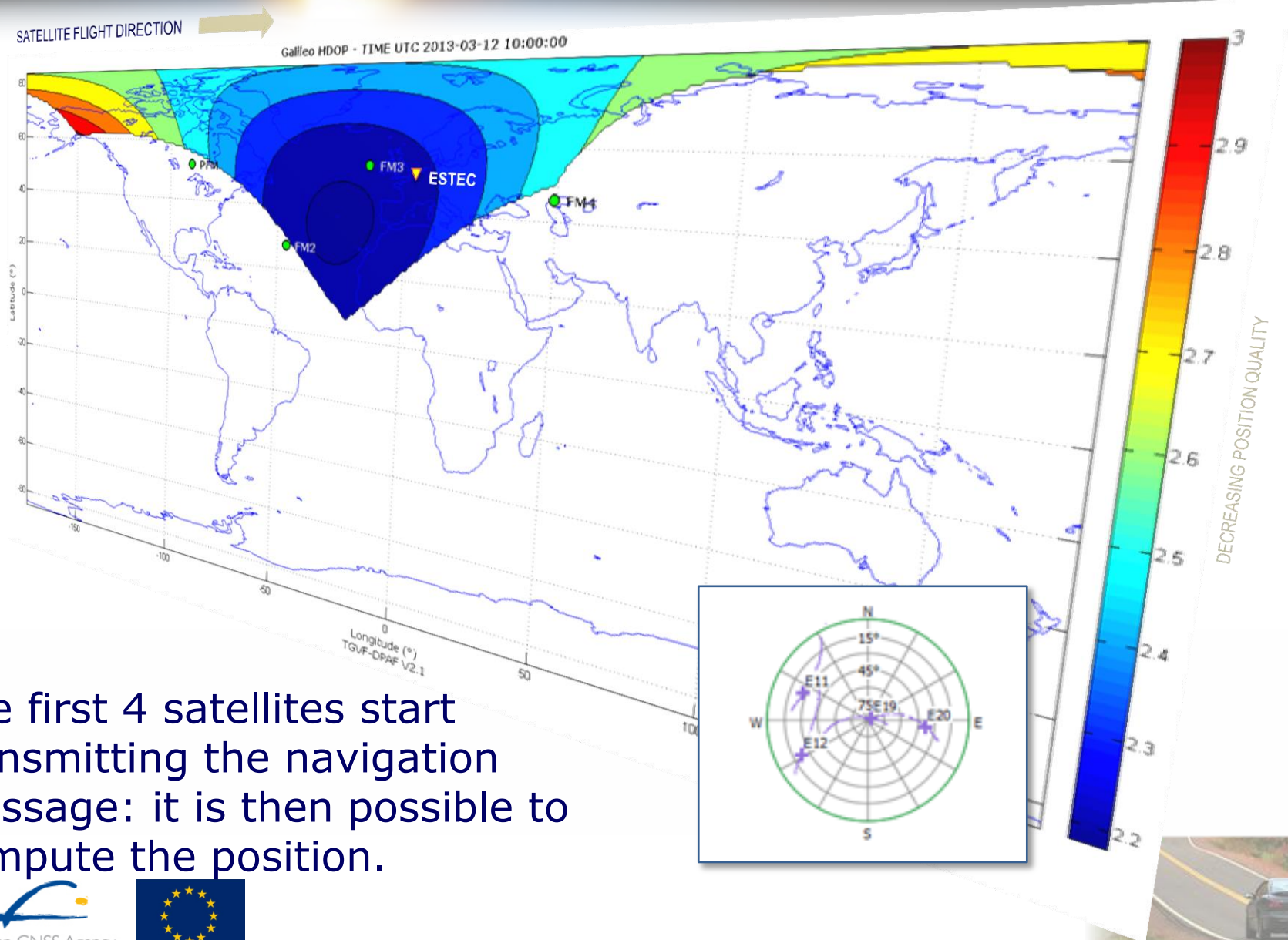
Galileo has already taken-off



- **4 operational satellites** have been launched, as 12 October 2012
- **Early services** will start in October 2014
- All **industrial contracts** necessary have been signed to ensure up to **26 satellites**
- The majority of **GNSS chipset and receiver** manufacturers already included or plan to include Galileo by Early Services.

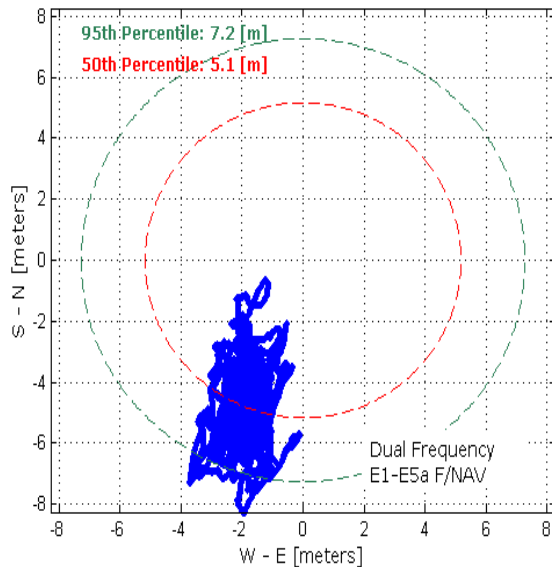


12th March 2013: Galileo starts transmitting the navigation signal...

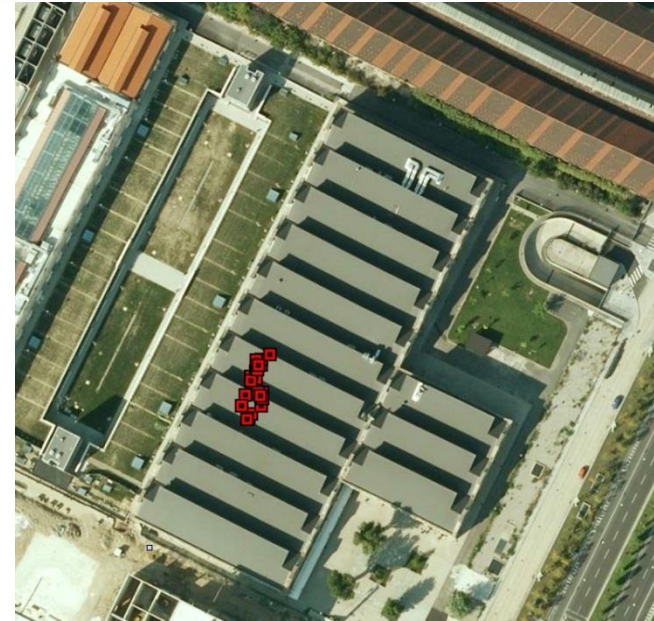


The first 4 satellites start transmitting the navigation message: it is then possible to compute the position.

...the same day, all over the world the first “position fix” with Galileo is computed



Source: European Space Agency



Source: NavSAS - Politecnico di Torino

- ✓ The first positions computed with Galileo confirms the excellent expected performances, at the state-of-the art in satellite navigation.
- ✓ The satellites also transmit a time reference of atomic standard.



ASECAP and GSA join forces to transform challenges into opportunities

- Understand how European GNSS technology can add value to road infrastructure operators
- Identify concrete actions to capture this value



ASECAP and GSA worked on a **joint roadmap to take advantage of new GNSS services** in the evolution of new tolling schemes and ITS deployment



5 initial actions to better understand each other and remove existing barriers

1. Identification of GNSS-DSRC coexistence and interoperability
2. Analysis of strengths/weaknesses of GNSS for tolling
3. Monitoring and assessment of the legal framework, R&D projects and other RUC developments
4. Optimisation of cross-border / multi-ETC enforcement
5. Assessment of the potential of new applications and new markets



1. Task force of experts of GSA and ASECAP (8 members)
2. Kick-off in Dubrovnik 28th May 2013
3. Implementation of 2 actions by the end of the year

When to implement the actions?

		May				June				July				August				September				October				November				December				January				February				March			
ACT #	Action description	week	1*	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
ACT 1	Identification of GNSS-DSRC coexistence and interoperability issues																																												
ACT 2	Analysis of the strengths and weaknesses of GNSS for tolling																																												
ACT 3	Monitoring and assessment of the legal framework, R&D/projects and other RUC developments																																												
ACT 4	Optimisation of cross-border / multi-ETC enforcement																																												
ACT 5	Assessment of the potential of new applications and new markets																																												

- ASECAP Conference (Dubrovnik, 26-28 May)
- European ITS Conference (Dublin, 4-7 June)
- International Baltic Road Conference (Vilnius, 26-28 August)
- ITS World Conference 2013 (Tokyo, 14-18 October)
- Road User Charging Conference 2014 (TBC)



Getting started!

Action 2: Analysis of the strengths and weaknesses of GNSS for tolling

Carry out a detailed assessment of the strengths and weaknesses of GNSS for tolling in comparison with other existing technologies and namely DSRC, with a view to develop a sound business case for GNSS-applications in tolling for all stakeholders involved.

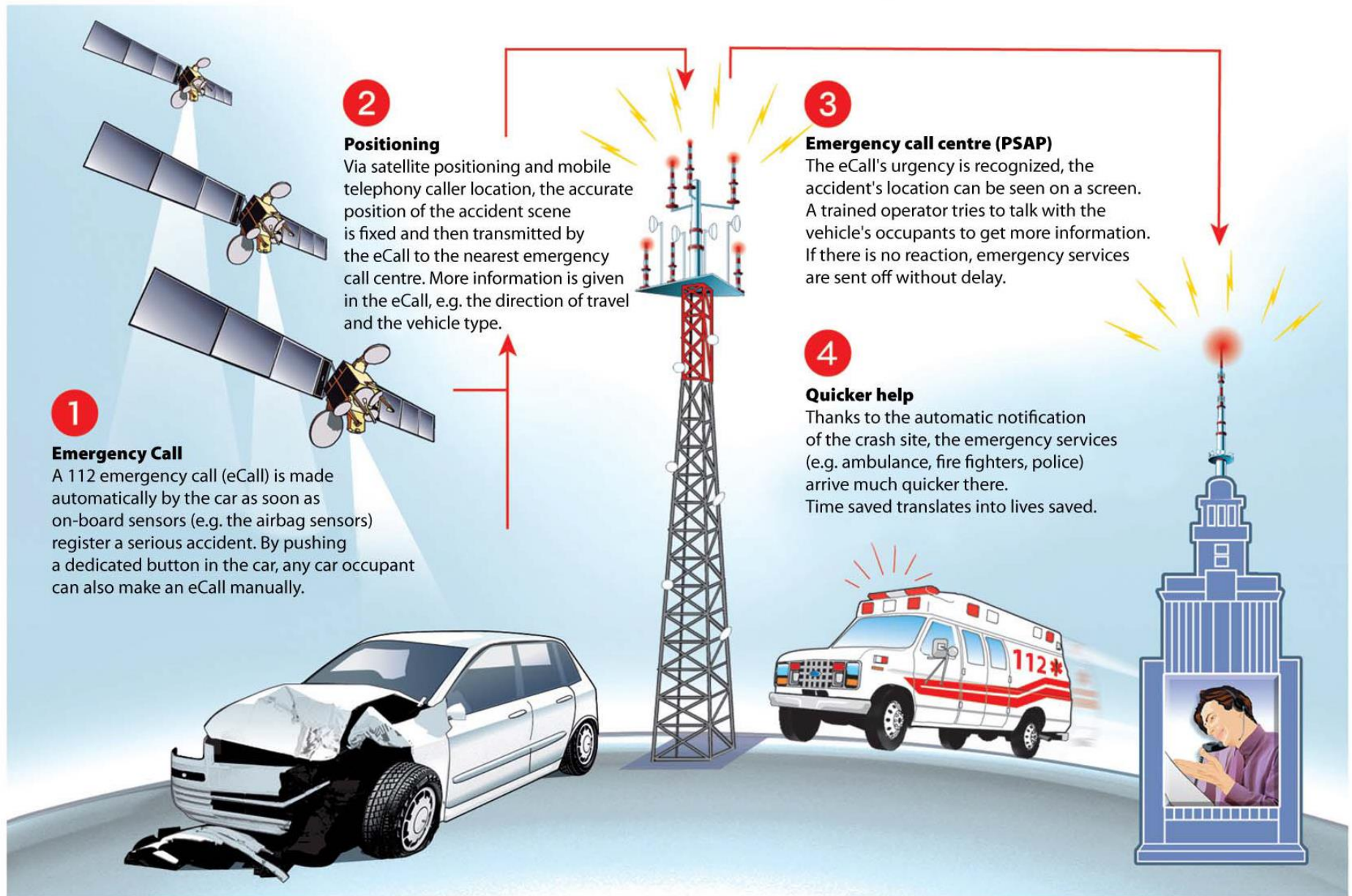
Action 3: Monitoring and assessment of the legal framework, R&D/projects and other RUC developments:

Gather the state-of-the-art of relevant EU and national legislation and schemes, as well as the outcome of pertinent R&D/projects and other RUC developments, and consequently assess the extent to which they support the consistent implementation of GNSS for tolling, the creation of synergies between applications and the legal value of vehicle positioning, in particular for the enforcement of third-party liability for operational losses.

The intended goal is to finalize these actions in time for ITS World Conference 2013 to be held in Tokyo (14-18 October 2013)



EGNOS and Galileo for a better eCall: Good position = Lives saved



Galileo for safer mobility: digital tacograph and dangerous goods

✓ Digital Tacograph:

- ✓ GNSS is proposed to register at least starting-ending time/location of the journey for enhanced regulation COM(2011) 451 -> 2018).

✓ Dangerous Goods:

- ✓ Building on ITS directive
- ✓ Some Member State are requiring the use of GNSS, and in particular of EGNOS and Galileo , for tracking and tracing of special goods, such as dangerous goods





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