

Association Française d'Ingénierie Système (AFIS) French Chapter of INCOSE

Jean-Luc Garnier, 29 May 2017



French Association for Systems Engineering:

- ☐ Non profit organization
- ☐ Affiliated member of INCOSE
- ☐ Created in 1999
- ☐ Composed of **members**
(companies, education and research)
and **individual members**

In 2017:

- ✓ **44 companies and education & research members**
- ✓ **630 individual members**



Growth:

+40% in 2016

Diversification in:

- New domains: Health care and health systems (promotion of Systems Thinking, Human Centric Design)
- New actors: Small companies

Cooperation with INCOSE Central, EMEA sector, INCOSE Chapters and regional levels

Better visibility and stronger ability to address new topics:

- New communication policy (2015) and set-up of new communication means (2016-2018)
- Development of partnerships within the French SE community (PLM, Simulation, Risk management, Research networks, etc.)
- Deployment at regional level (2014+)

Improved involvement and recognition:

- Creation in 2015 of the best SE PhD award
- In progress: Best paper award and best yearly performance award

Principle: regular review of the AFIS objectives and organization through strategic workshops (2015, 2017).

29-31 May 2017

SESE 2017 Tour

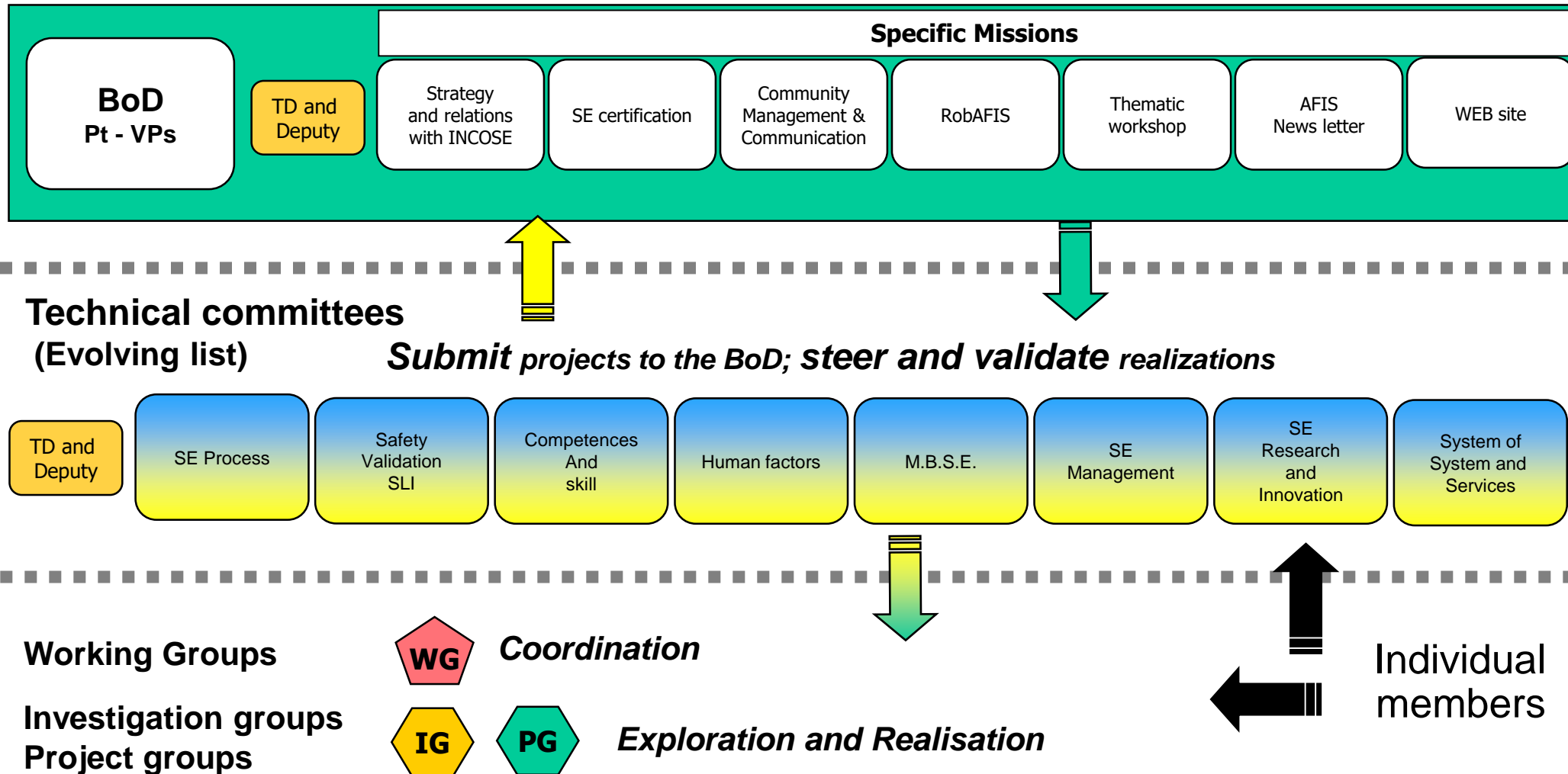


AFIS regional development

Corporate Advisory Board

Major decision on strategy and projects, ressources allocation and control

← Members



- ❑ **Global processes (CT PG : ctpg@afis.fr)**
 - Inter-disciplinary collaboration throughout the system life cycle in enterprise and extended enterprise contexts
 - Product line Engineering: First book already available in French and English. Follow-up topics: variability concepts, System variants through PBS, variants in architecture
 - Work to engage: added value of Systems Engineering when Value Engineering
- ❑ **System Engineering Management (CT MIS : ctmis@afis.fr)**
 - SE and PLM analysis for compatibility and complementary. Several papers and presentations available.
 - Investigation Agile methods applied to systems, based on French and INCOSE papers. SE (jointly with CT PG)
 - Improved Project and SE Management, as follow-up of the PjBS (combined WBS+OBS+PBS) model developed in 2015-2016.
- ❑ **Human Factors (CT FH : ctfh@afis.fr)**
 - Human-Centric Engineering: How to consider Engineering of Systems to help Human in their activities and their quality of life.
Expected output: a paper or a book.
- ❑ **SoS & Services – Architecture and SE (CT 3S-AI : ct3s-ai@afis.fr)**
 - Service SE Body of Knowledge
First chapter (100 pages in English): Product-Service-Systems (PSS)
Other chapters under development: Service Life cycles (plural) and Quality of Service

- ❑ **SE research & Innovation (CT RIIS : ctriis@afis.fr)**
 - **AFIS Vision 2030+, involving all the Technical Committee**
 - Current SE practices WRT existing visions (INCOSE, SERC, NATO STO, Etc.)
 - Needs and forecast
 - Elaboration of the new AFIS vision
- ❑ **Model Based System Engineering (CT MBSE : ctmbse@afis.fr)**
 - Requirement and architecture within modelling context
Book in English (ready for printing)
 - Jointly with NAFEMS and the SV2S T.C.: Modelling & Simulation in IV&V activities.
- ❑ **Safety, Validation and ILS (CT SV2S : ctsv2s@afis.fr)**
 - Joint activities with IMDR (Institute on Risk Management) to define activities for technical risk management.
Expected output: a paper or a book.
 - Joint activities with AISE (Italian Chapter) in order to provide an IVV session during the EMEA workshop
- ❑ **Competency and Training (CT FC : ctfc@afis.fr)**
 - material for teaching and training S.E. in any course of action (MOOC, training in Universities, consulting, etc.)
First usage is for a MOOC leaded by SUPMECA

❑ Specific Missions

➤ Material for training and Coaching SMEs

A first draft of book is available and 4 SMEs are involved in pilot projects

➤ Standardisation:

- Overview of the ISO/IEC/IEEE 15288 evolution
- ISO/IEC/IEEE 15288 and CMMI-Dev parallel analysis

➤ Certification

- INCOSE Certification is submitted as French professional certification

➤ RobAFIS

- Preparation of the next French session
- Joint activities with GfSE for a German session

➤ Community Management

- Improvement of the communication workflow with a better AFIS web-site consistency

➤ EMEA 2017 Workshop: Preparation of 5+ sessions

➤ IFAC WC 2017: Preparation of an SE track with 6 accepted papers

AFIS thematic Days - 2017

- ☐ **12 January, Grenoble: IV&V Workshop (South-East Region)**
- ☐ **20 April, Nimes: SE in the Health Care domain (South region)**
- ☐ **23 May, Paris: Architecting and MBSE**
- ☐ **15 June, Paris, jointly with CESAMES (Training and Consultancy organisation): 3rd session on Collaborative Engineering.**
- ☐ **September, Toulouse, jointly with GIFAS (Industry consortium): SE in the Aeronautic and Space domains**
- ☐ **To be confirmed: IV&V optimisation along the whole system life cycle**
- ☐ **To be confirmed: Norms and Standards for SE (jointly with AFNOR, BNAE and CCNDI)**
- ☐ **December: RobAFIS (Robotics competition open to universities)**
- ☐ **Every 2 year (2018): SE forum involving Industry and Academia**

Books and guides : main pieces

L'ingénierie Système d'une Ligne de Produit
Product-Line Engineering
(Elected "Best INCOSE Product" in 2015!)

(French)
(English)

Découvrir et comprendre l'ingénierie système
[Discover and understand Systems Engineering]

(French)

Vision AFIS pour les années 2020-2025
[AFIS vision for 2020-2025]

(French)

REGAL (Requirement Engineering),
AFIS & INCOSE Product

(English)

Bonnes pratiques en ingénierie des exigences
[Best practices for Requirement Engineering]

(French)

Bonnes pratiques en maîtrise des interfaces
[Best practices for Interfaces Engineering]

(French)

Bonnes pratiques en prise de décision multicritères
[Best practices for Multi-criteria decision]

(French)

Requirement follow-up during architecture definition
[Will be published in the INCOSE store]

(English)



Note: Publication list available on AFIS Web Site : www.afis.fr.

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