

Joint Presentation by Member States DE – IT – FR - RO Chapeau Text for IPCEI ME2: Process and Content

Sherpa and (Industry) Points of Contact Meeting
on 26 April 2021

Table of Contents



Part 1: Germany



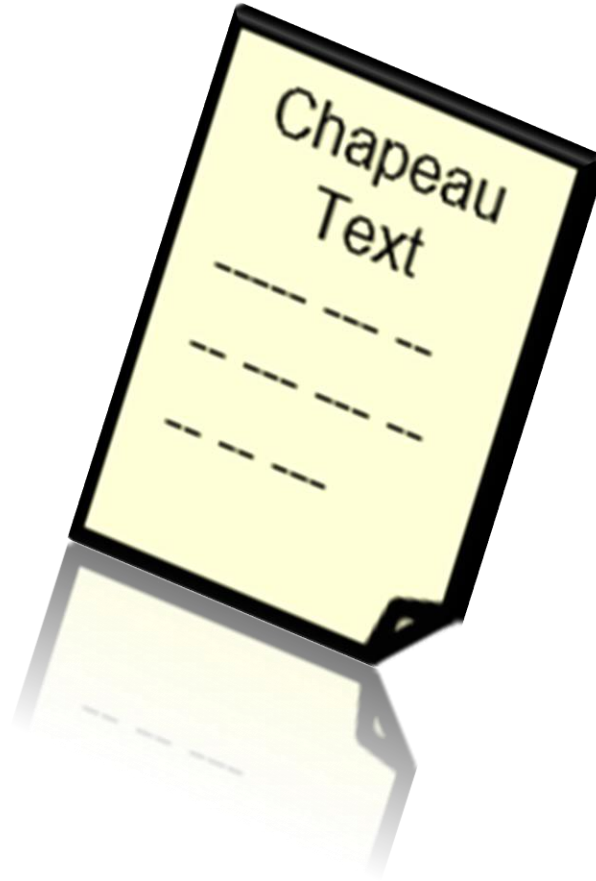
Part 2: Italy



Part 3: France



Part 4: Romania



Part 1: Germany



I.1 Process for Work on the Chapeau Text



I.2 Responsibilities at Member State (MS) Level

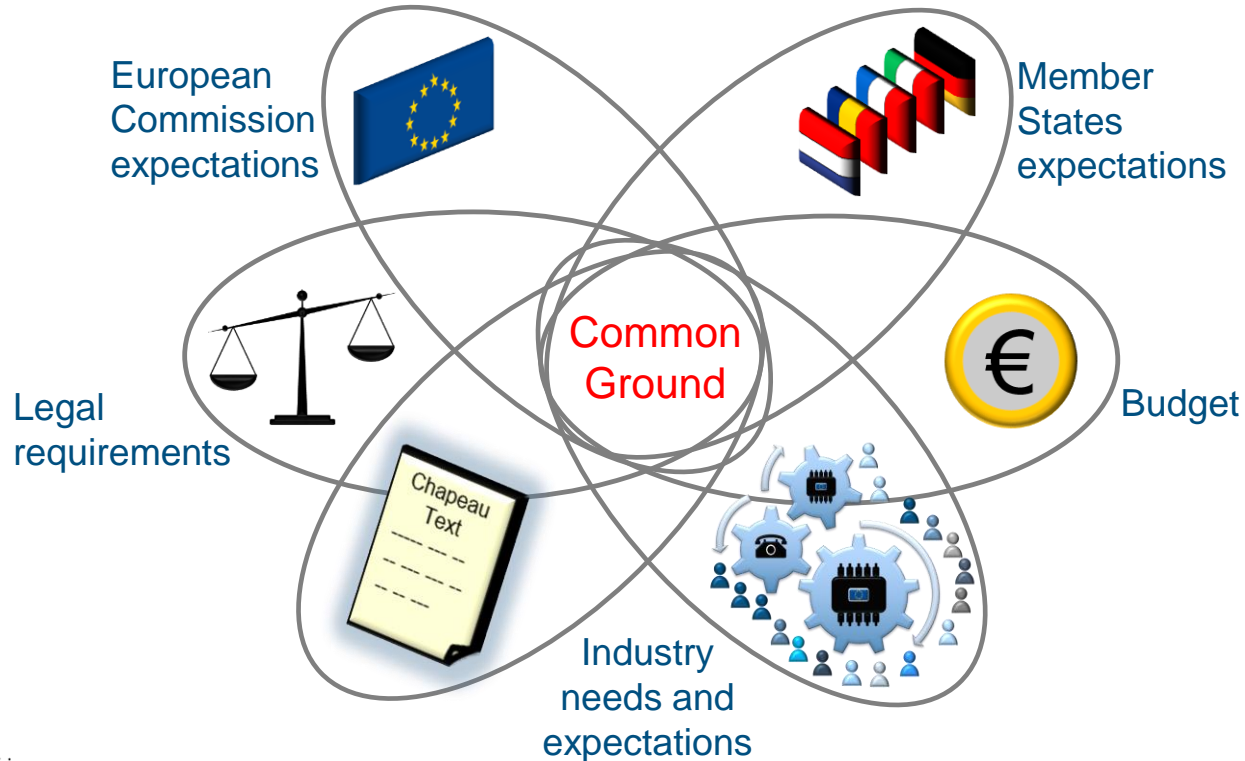
In the Chapeau Text drafting process, (Industry) Points of Contact from each MS have to:

- ✓ act as coordinators on MS level to ensure that the input they bring into the drafting process in the joint circle on EU level adequately reflects the positions of all companies in their own circle on MS level;
- ✓ act as speakers/penholders in the drafting process taking place in the joint circle on EU level;
- ✓ relay all relevant information back and forth between the joint circle on EU level and all companies which are part of their own circle on MS level.

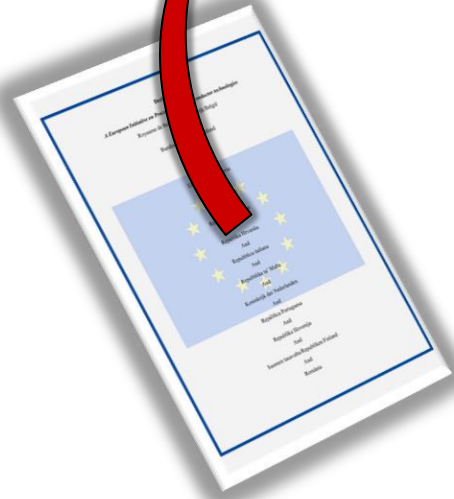
At the same time, Government representatives from each MS have to:

- ✓ ensure adequate supervision of the drafting process in their own MS;
- ✓ take care of possible complaints regarding the process in their own MS;
- ✓ relay information from meetings between EC and MS on Sherpa level or higher which is relevant for the Chapeau Text to (Industry) Points of Contact or (if needed) all companies from their own MS.

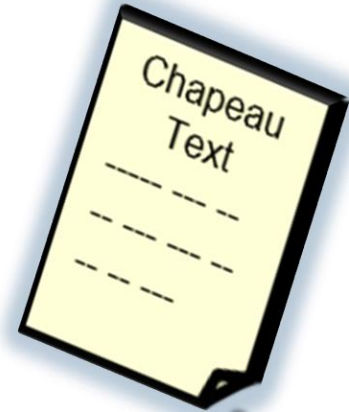
II.1 Content of the Chapeau Text: Expectations



II.2 Member States Expectations in Joint Declaration



*„... **agree** to work together in order to **bolster Europe’s electronics and embedded systems value chain.** ... particular effort to **reinforce the processor and semiconductor ecosystem** and to expand industrial presence **across the supply chain ...”***



II.3 Expectations: Search for Common Ground



➤ Suggested starting point:

✓ Going beyond the first IPCEI ME in an ambitious, but realistic way.



➤ Need for precision in discussion and wording of Chapeau Text:

✓ E.g.: What is “advanced” or “cutting/leading edge” regarding different products?



➤ Careful analysis and consideration of the needs of industry and society:

✓ E.g. IPCEI Communication by EC (OJ C 188, 20.6.2014, p. 4-12): “... *IPCEIs make it possible... so as to overcome important market or systemic failures and societal challenges which could not otherwise be addressed ...*”

Part 2: Italy




Foundational Technologies in Italy

□ Mainstream Microelectronics Value Chain and Connectivity “*beyond the first IPCEI on Microelectronics*”

- Development of new semiconductor Technology Platforms and new Integrated Components/Smart Systems/Modules
- Development of semiconductor wafers, materials, and tools

Trustworthy components, Safety & Security	Sense	Photonics, Next generation sensors, MEMS <ul style="list-style-type: none"> ▪ New Generation Micro-Nano Systems Technologies Platform and Integrated Components/Smart Systems: Advanced MEMS with AI / NEMS / MOEMS / RF-MEMS / Bio-MEMS and MNBS / RF and <u>UWB</u> sensors, etc. ▪ Optoelectronics: <u>SiC</u>, <u>SiGe</u>, SPADs, LEDs, sensors for security, health, and smart applications 	Heterogeneous system-level integration & Advanced packaging
	Think	Processor, AI/ML/DL <ul style="list-style-type: none"> ▪ AI and Edge computing (<u>AI@Edge</u>) as key enablers for automotive, manufacturing, health, safe 5G/6G, smart applications, and security technologies. High-performance networked Edge computing nodes and systems as enablers for future AI applications at <u>low-size chip scale</u>: new Microcontrollers & MCU with e-AI (embedded Artificial Intelligence) / AI modules with NVM (Non-Volatile Memories) and IMC (In Memory Computing) / AI neural networks and tools to develop chipsets with AI HW acceleration / etc. ▪ Enhanced resolution Radar systems for ADAS platforms / Digital RF receivers / etc. 	
	Act	Next generation power and actuators, energy efficiency everywhere <ul style="list-style-type: none"> ▪ New Generation Silicon Technologies Platform (smart power and highly integrated power) and Integrated Components/Smart Systems/Modules: Power Management ICs with digital algorithms and intelligence / Distributed motor driver devices / Smart Power AI / New highly integrated power ICs / Mixed <u>GaN-Si</u> devices / Wireless power solutions / Highly integrated <u>VIpower</u> / Energy Harvesting & galvanic isolation, etc. ▪ Next Generation Wide Band-Gap Technologies Platform (<u>SiC/GaN/RF-GaN</u> power discrete) and Integrated Components/Smart Systems/Modules: Power <u>Discrettes</u> and Modules (<u>Si/SiC/GaN</u>) 	
	Communicate	5G/6G, trustworthiness <ul style="list-style-type: none"> ▪ RF technologies and components (e.g., RF <u>GaN</u> on Si, RF-MEMS filters, etc.) with processing capabilities and modules for 5G&6G / IoT connectivity for Industrial and Smart applications ▪ AI and Edge computing (<u>AI@Edge</u>) as key enablers for safe 5G/6G technologies ▪ SoC, <u>SiP</u>, ASICs, and Modulation chain for <u>5G/6G</u> ▪ <u>Cybersecurity</u> 	

Microelectronics Ecosystem Matrix in Italy

	Materials (substrates, gases)	Tools and Equipment	Chip Design, IP	Tech R&D	Wafer manufacturing	Packaging, Assembly, Test	System-level integration, (HW/SW)
Processor	X		X	X			X
Communication (5G/6G)	X		X	X	X	X	X
AI/ML/DL			X	X	X	X	X
Trustworthy components, Safety & security			X	X	X	X	X
Photonics	X	X	X	X	X	X	
Next generation sensors	X	X	X	X	X	X	X
Next generation power	X	X	X	X	X	X	X
Etc.							

Part 3: France



French stakeholders have expressed strong interests in the IPCEI

After the Joint Declaration and after French call for interest and consultations with stakeholders, we propose to contribute to the IPCEI the following topics:

ELECTRONICS :

Design / Digital –
intermediate up to
advanced nodes

Power Electronics

Sensors and
photonics

RF for 5G/6G

Systems & sub-
systems, SiP,
PCB & EMS

A first company involved in today's meeting : STmicroelectronics

COMMUNICATION
TECHNOLOGIES :

5G&6G end-to-end
telecoms solutions
(HW/SW)

A first company involved in today's meeting : ORANGE

France proposes the following steps

Chapeau text contribution, first at member state level and at POC level

Draft of individual pre notification file under process for 13 stakeholders identified today,

- **9 on electronics and**
- **4 on connectivity/telecommunications**
- **(portfolio + funding gap + prodcom)**

Matchmaking event participation

France expectations regarding the inclusion of telecoms in the Joint Declaration

- **Telecoms should be considered as a continuity of the electronics value chain and not only as vertical applications for electronic technologies.**
 - We propose the following additions so that the Joint declaration better reflect the inclusion of connectivity:
 - Adding this element to the title : “A European Initiative on Processors, semiconductor **and electronic communications** technologies”
 - Add a new paragraph in the preamble to show the interdependence between telecoms and electronics and the need for Europe to promote the value chain of electronic communications network equipment
 - Add elements related to connectivity in the two points of agreement of the joint declaration
- **The scope should include hardware and software telecoms network equipment and not be limited to 5G-6G electronic components for telecoms equipment.**
- **We invite other Member States whose stakeholders have expressed interests in proposing projects related to 5G/6G to join us in this effort to strengthen the connectivity component of the Joint declaration**

Part 4: Romania



Table 2: Microelectronics Ecosystem Matrix – ROMANIA footprint

	Materials (substrates, gases)	Tools and Equipment	Chip Design, IP	Tech R&D	Wafer manufacturing	Packaging, Assembly, Test	System-level integration, (HW/SW)
Processor							
Communication (5G/6G)							
AI/ML/DL							
Trustworthy components, Safety & security							
Photonics							
Next generation sensors							
Next generation power							
Spintronics devices							
Superconducting electronics							
Industry 4.0							

Legend:

	<u>Ongoing activities in industrial and R&D units</u>
	<u>Ongoing activities in R&D units (normally, at least one participation in a European project consortium on the topic)</u>
	<u>Ongoing activities in industrial units</u>
	<u>No activities in RO</u>

RO Expectations for IPCEI-ME-2

- Although summarized in a couple of days, the Microelectronics Ecosystem Matrix in Romania is based on more than three months of activity in a Working Group including the private sector, the academic and institutional research, civil society organizations and regional development agencies under the aegis of the Romanian Academy.
- The expectation is that IPCEI-ME-2 will result in a consolidation of the Microelectronics Ecosystem in Romania, starting from existing strengths and capabilities, but also with an opening towards addressing areas not yet (or no more) covered by the activities in the country: new investment opportunities at any step in the value chain could be supported in the framework of the IPCEI-ME-2.
- The intention is to identify topics and European needs that could be covered, in a complementary and collaborative mode, by stepping up investments and activities in Romania.

Thank you for your attention

