European Joining Platform

to Manufuture

6th General Assembly

Joining Platform Committee Introduction

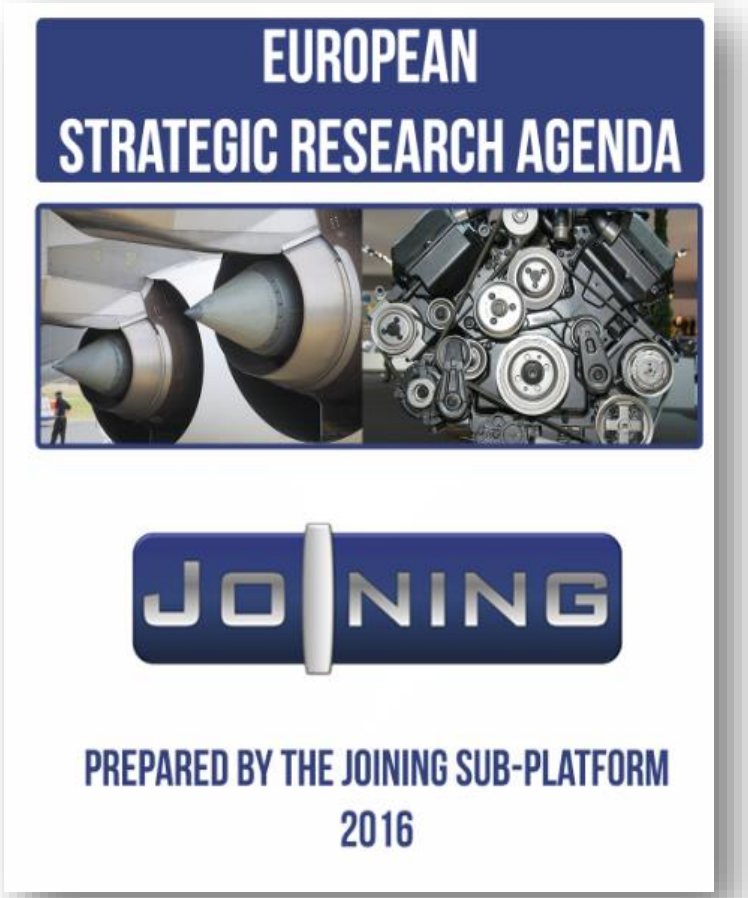
Kristian Martinsen – Industrial Chairman

17th June 2016



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Joining Sub-Platform Strategic Research Agenda (SRA)



- Member Survey Being Introduced
- Timeline of Priorities Developed
- TRL Identified
- Research Priorities Identified

Joining Sub-Platform Strategic Research Agenda (SRA)

- In order to identify the needs from the European Joining Industry a survey was carried out across Europe;

- The top priorities, for the different areas and the current/required technology readiness levels of (TRL) are shown in the images below;

- These top priorities are aligned with “when” industry needs it to be ready.

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Joining Sub-Platform Strategic Research Agenda (SRA)

Member survey:

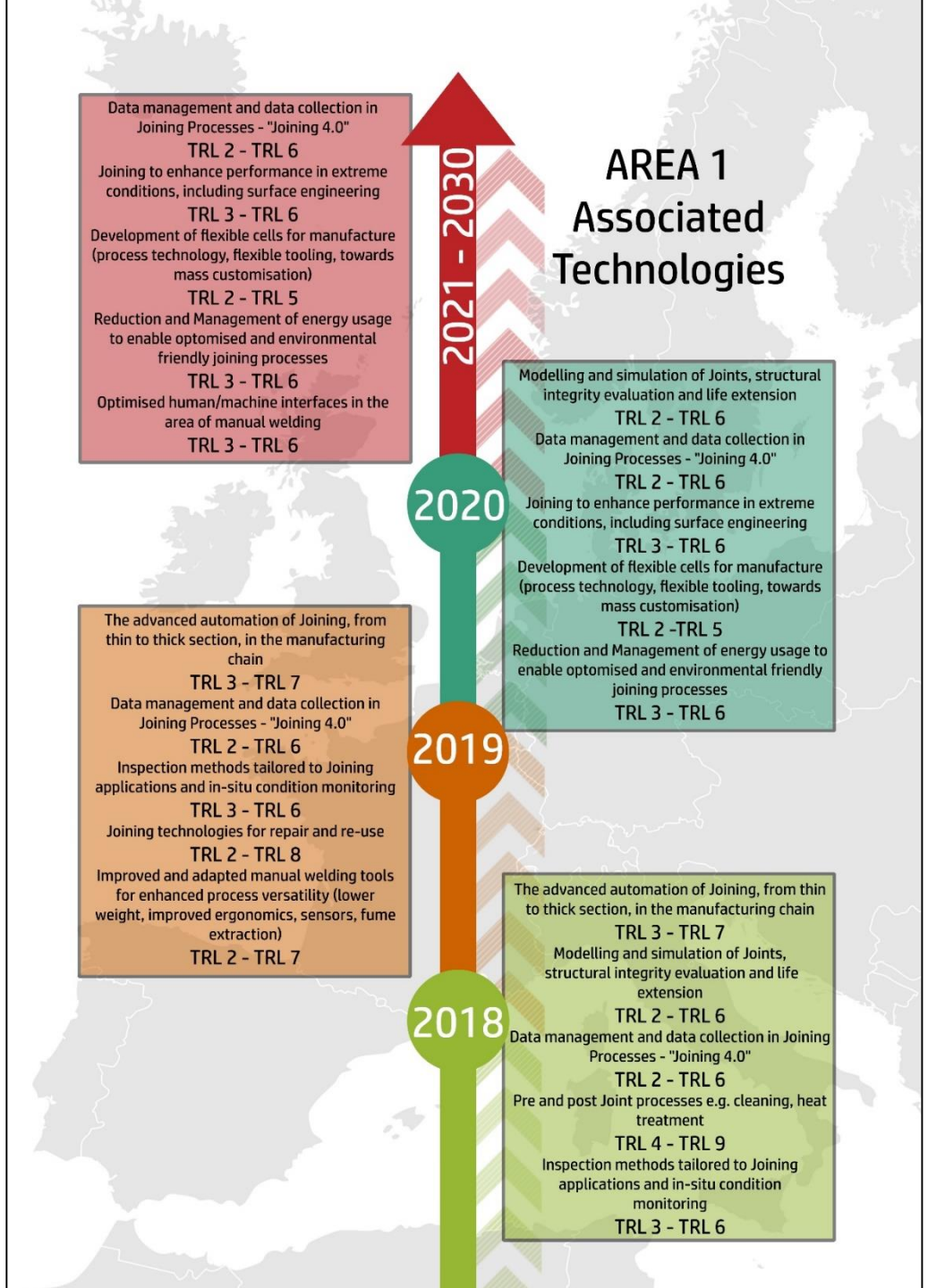
- Aim: Rank research topics by priority & understand the TRL of each
- 260 responses to date
- Need to keep up to date and maintain!!!!
- Use the results to update the SRA
- Present the results to EFFRA

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Joining Sub-Platform Strategic Research Agenda (SRA)

Results of the Industrial Survey and the new SRA 2018-2020……and beyond 2020

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JOINING

Topics and respective TRL's for Area 1 – Associated Technologies.

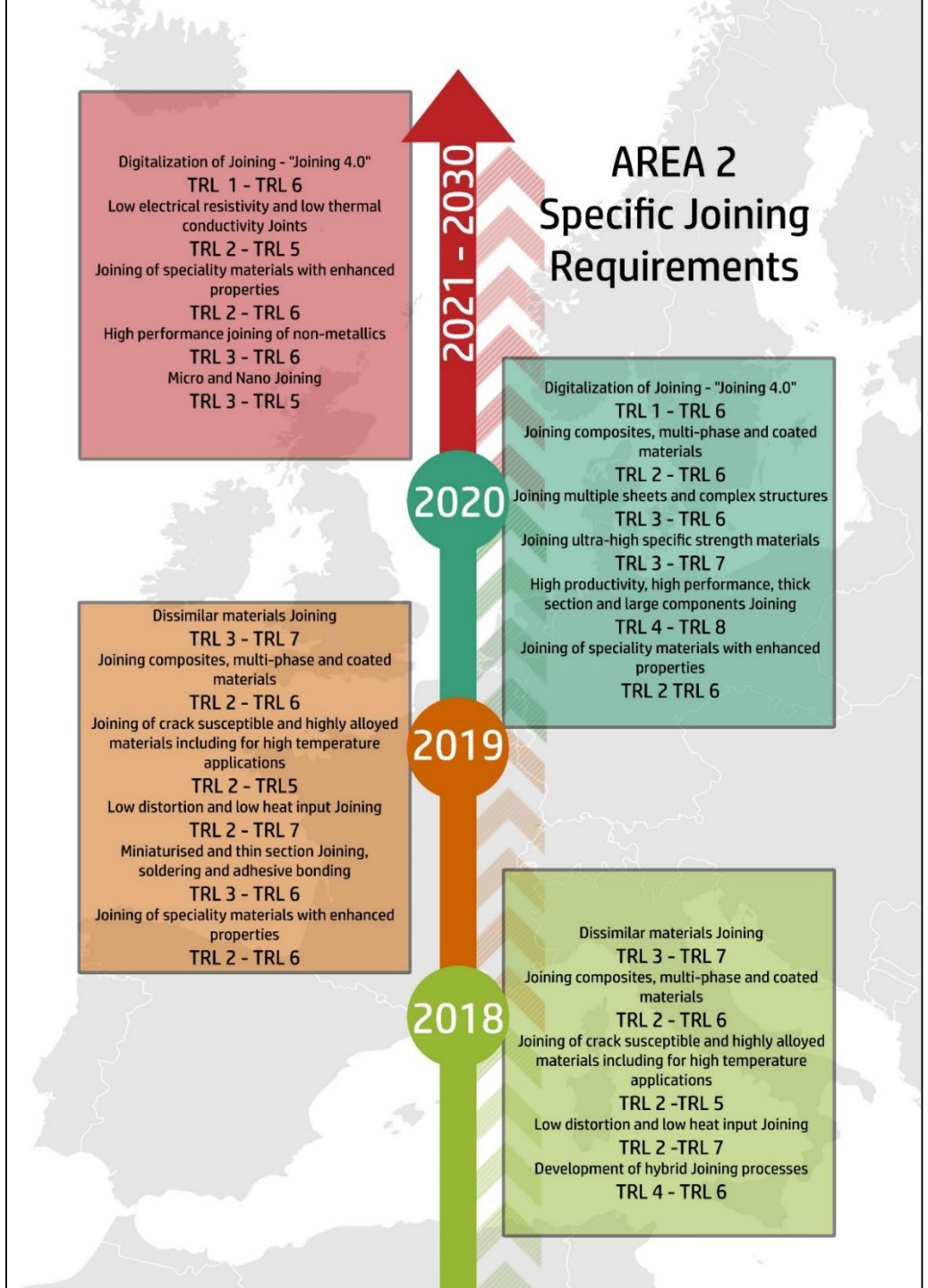
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Some of these topics gain even more relevance due to the fact that industry has highlight them in different years.

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Associated Technologies

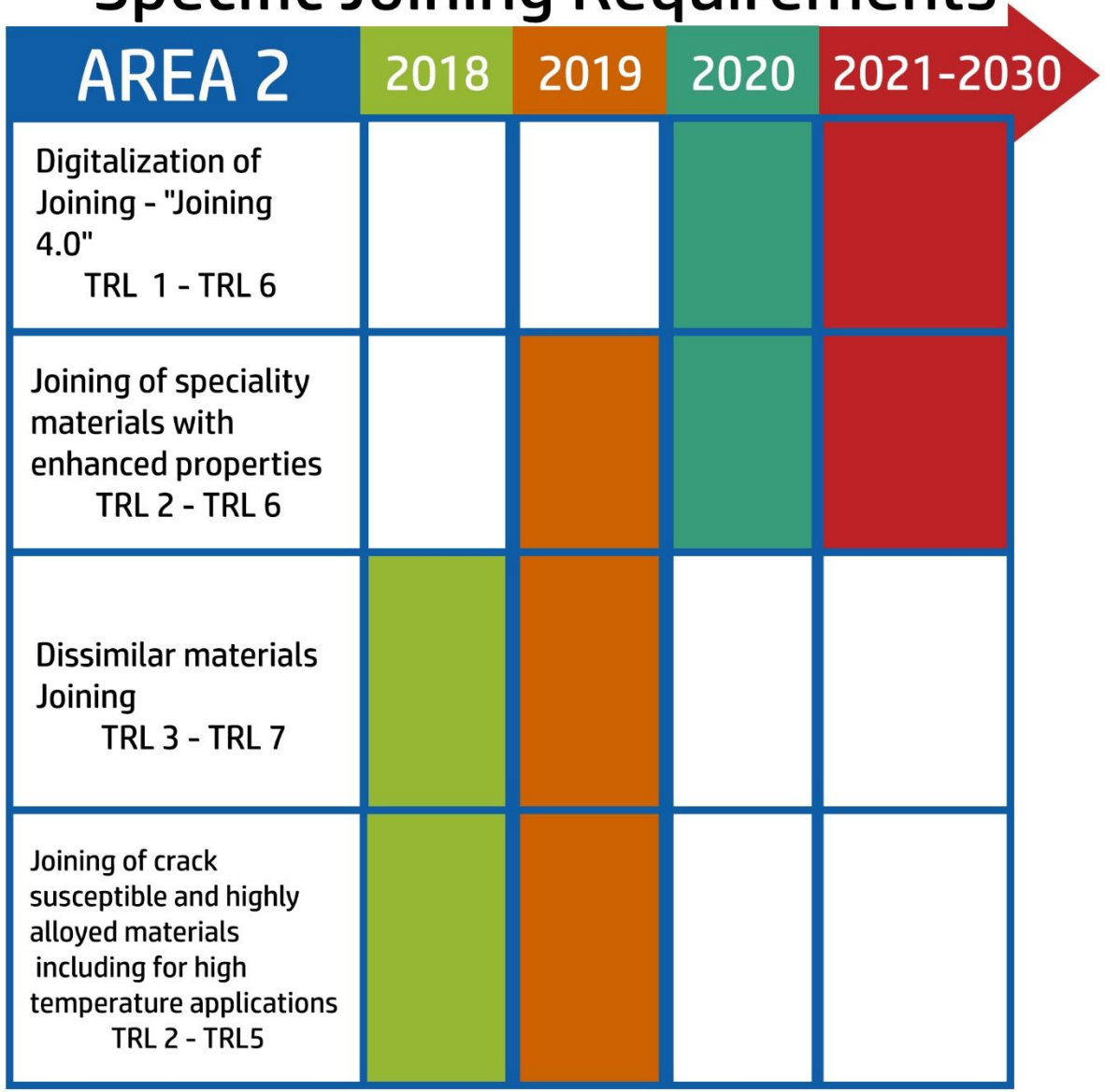
AREA 1	2018	2019	2020	2021-2030
Data management and data collection in Joining Processes - "Joining 4.0" TRL 2 - TRL 6				
Joining to enhance performance in extreme conditions, including surface engineering TRL 3 - TRL 6				
Development of flexible cells for manufacture (process technology, flexible tooling, towards mass customisation) TRL 2 - TRL 5				
Reduction and Management of energy usage to enable optomised and environmental friendly joining processes TRL 3 - TRL 6				
The advanced automation of Joining, from thin to thick section, in the manufacturing chain TRL 3 - TRL 7				



Topics and respective TRL's for Area 2 – Specific Joining Requirements

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Specific Joining Requirements



Some of these topics gain even relevance due to the fact that industry has highlight them in different years.

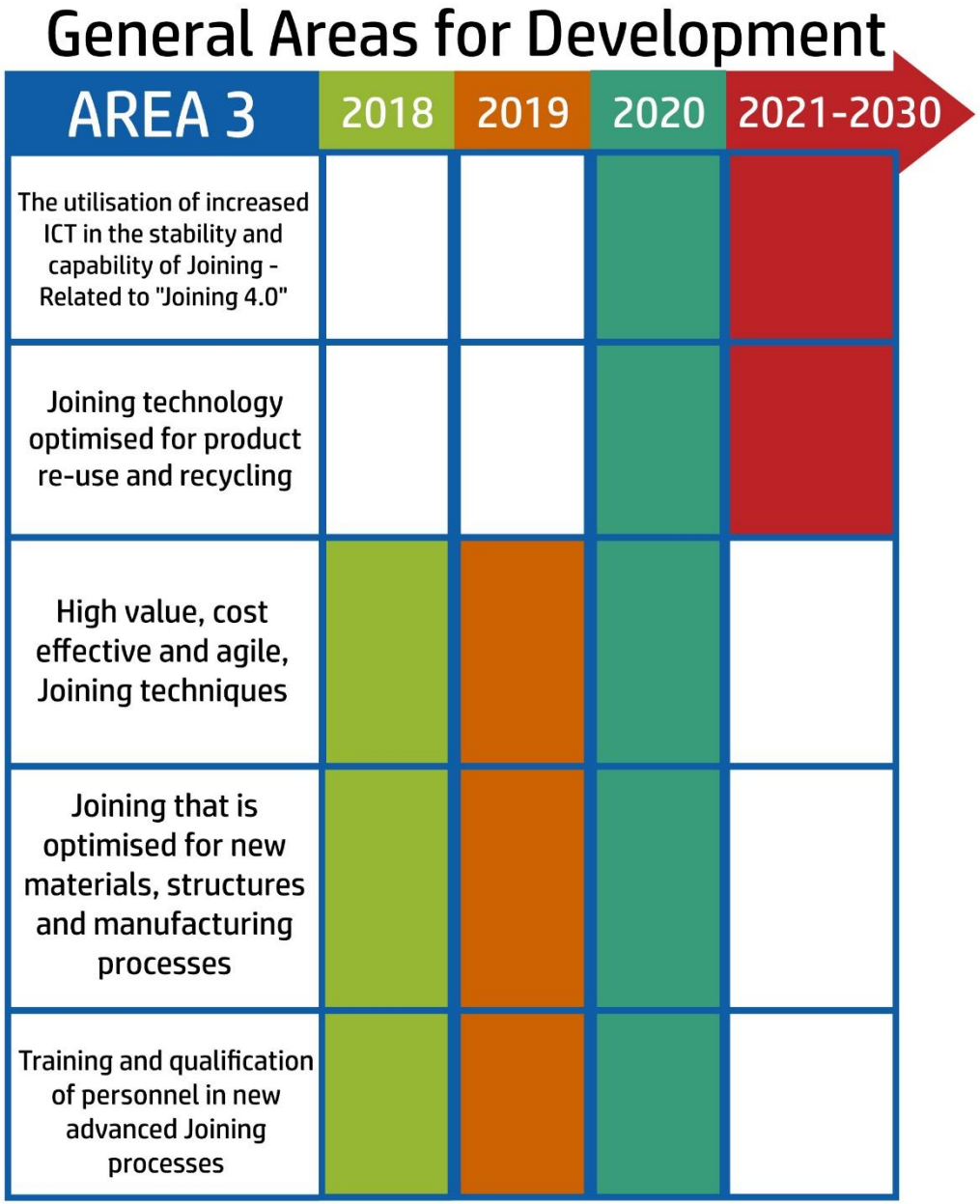
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Topics and respective TRL's for Area 3 – Specific Joining Requirements

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Some of these topics gain even more relevance due to the fact that industry has highlight them in different years.



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Joining Sub-Platform Strategic Research Agenda (SRA)

Top priorities identified from survey:

- Digitalization of Joining – JOINING 4.0
- Dissimilar material Joining
- Joining that is optimized for new materials, structures and manufacturing processes
- Joining to enhance performances in extreme conditions
- Joining of special materials with enhanced properties
- Joining of crack susceptible and highly alloyed materials
- The advanced automation of Joining
- Development of flexible cells for manufacture
- Data Management and Data collection – JOINING 4.0
- High value, cost effective and agile Joining techniques
- Training and Qualification of Joining Personnel