



CCA presentation aligned with MAAP final

“Cross cutting Activities”

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Siv Leth, S2R CCA coordinator



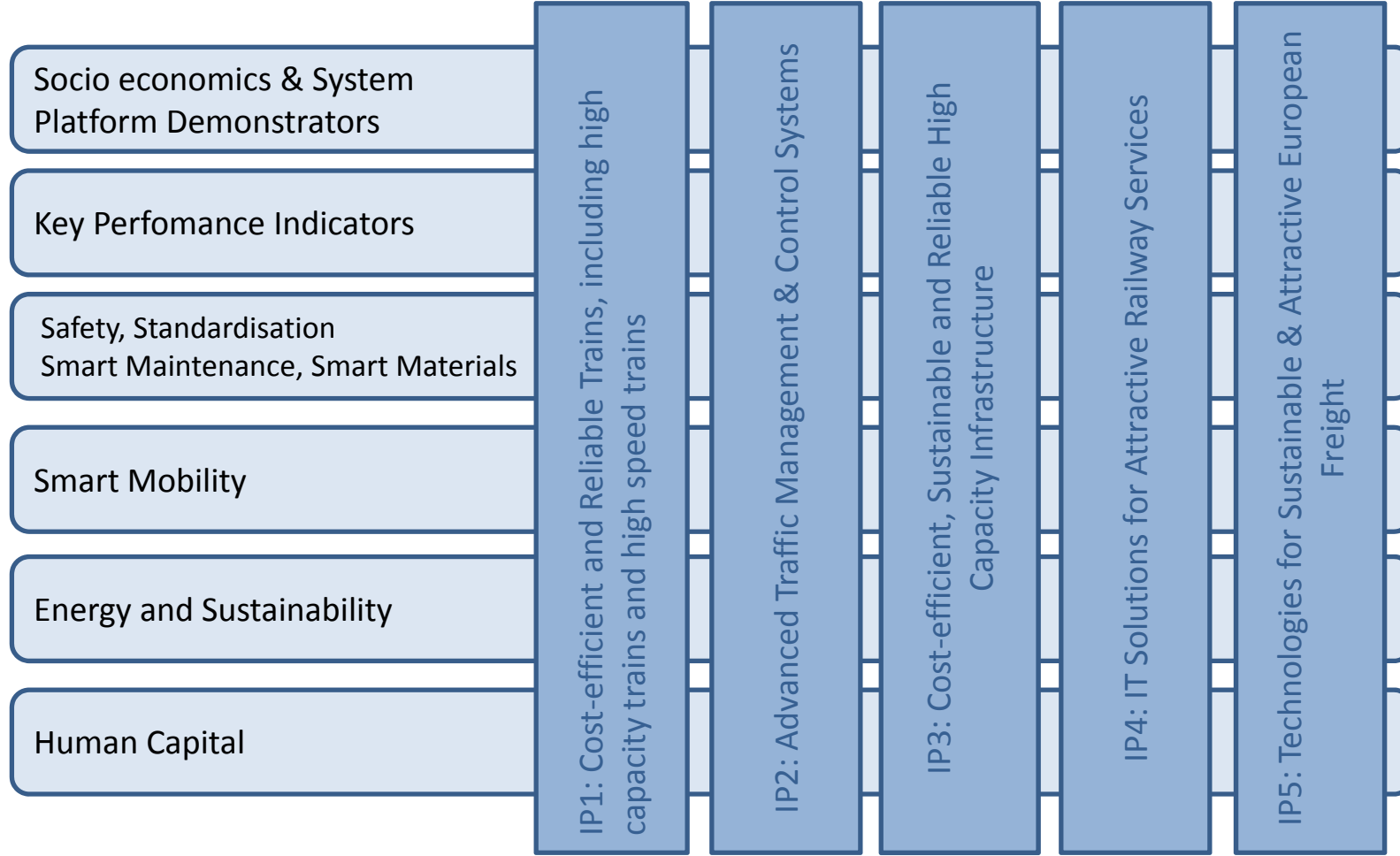
CCA Main objectives from MP

The performance of the railway system will only be improved if it is understood and managed as a whole system

- Shift2Rail framework is structured around five asset-specific Innovation Programs (IPs) IP1-5
- These five Innovation Programs are **not independent** of one another
- For this reason, Shift2Rail will also be structured around **cross-cutting themes** that are of relevance to several of the projects and takes into account the **interactions** between Innovation Programs and provides a **system level approach** for the different subsystems
- The objective of the cross-cutting activities is to **ensure that the R&I activities within the different Innovation Programs are closely aligned** in terms of their objectives and their requirements, as well as in terms of the **methodologies for simulation for virtual design and testing** as well as **evaluation and assessment of impacts**



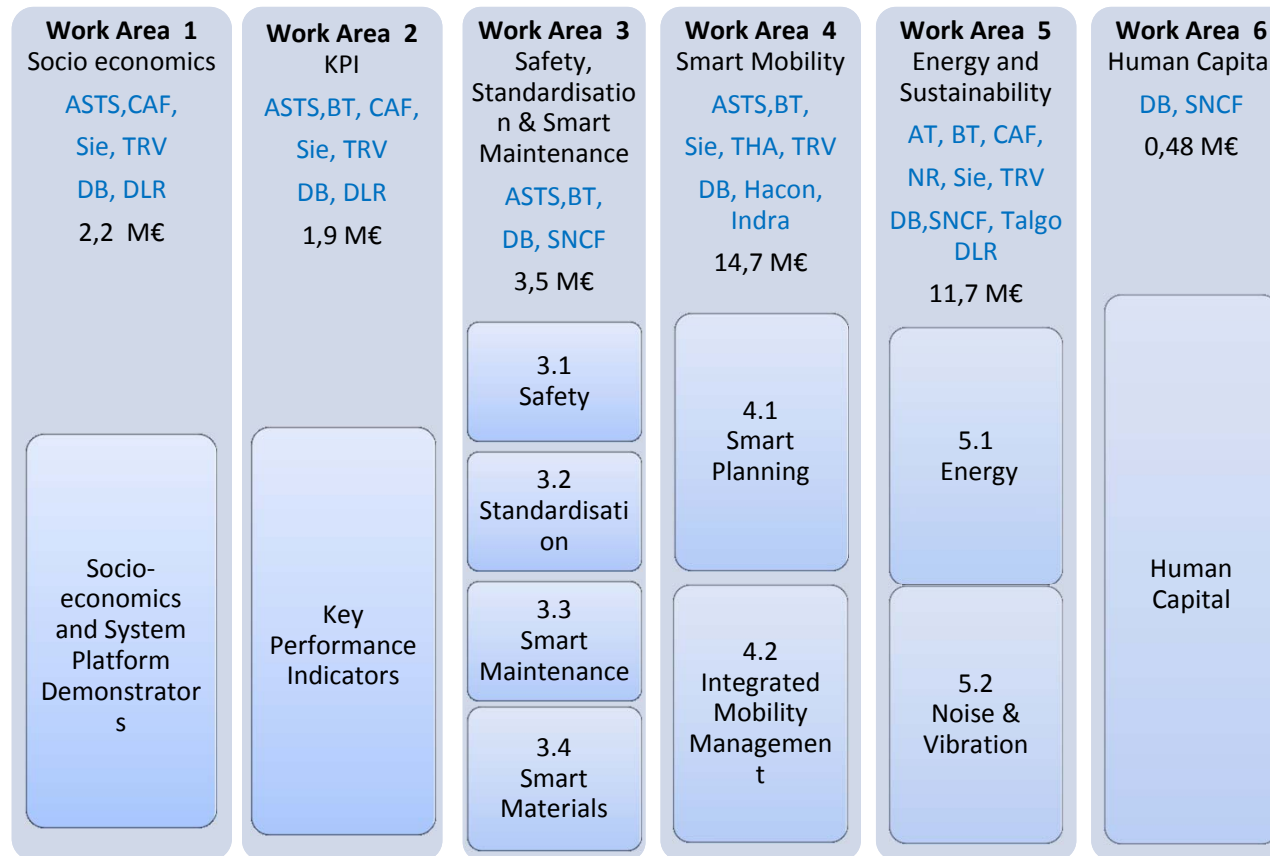
CCA - Illustrated





Multi Annual Action Plan CCA

Overview of the WAs, proposed participants and budget (34,48M€)



- Optimize research results by providing a scientific view on system levels from members as well as with an important part open calls



Multi Annual Action Plan CCA

Key objectives per WA

- 1) **Socio-Economics** The overall objective of WA 1 is to assess the railways from an outside perspective and bring an understanding how rail can be **a catalyst in transformational societal changes**
- 2) **KPI** – Show that the results of the JTI are **fulfilling the expected results** during the project run time comparison of the predicted outcomes against the demonstrated results
- 3) **4S** - global approach of the safety, transfer Shift2rail results of innovation activities into standards, overall maintenance concept “Vehicles monitor themselves” that makes use of on-board diagnostics, transfer new materials
- 4) **Smart Mobility** – simulation w integrating planning activities and status information, Traffic Asset and Freight Operations
- 5) **Energy and Noise** - Ensure that Energy and N&V aspects are properly considered and integrated, Deliver a standardized methodologies for predictions
- 6) **Human Capital** - Making use of the benefits of digitization and automation for job profiles and skills challenges imposed by demographic change and comprehensive and radical technological innovations



Multi Annual Action Plan CCA open calls

- Important budget in CCA for open calls
- Example of open calls research
 - Expertise outside the traditional rail sector for new perspectives to mobility and rail as a mobility enabler. Research in e.g. the behavioral sciences
 - Definition and determination of KPIs for the more qualitative objectives, like attractiveness
 - Safety is mostly open calls: application of the global assessment method safety Standardization: Experts of standardization processes, Smart Maintenance: software development
 - Smart planning: Development of dispatching algorithms for micro-level railway simulation.
 - Energy: Holistic model development support with operational knowledge for urban transport and for validation of the achieved system level results.
 - Noise: Develop, validate and implement new enhanced acoustic and vibration simulation models
 - Human Capital: Competences in areas such as organization , human sciences, management