



The SESAR performance measurement process

“What do I need to do?”

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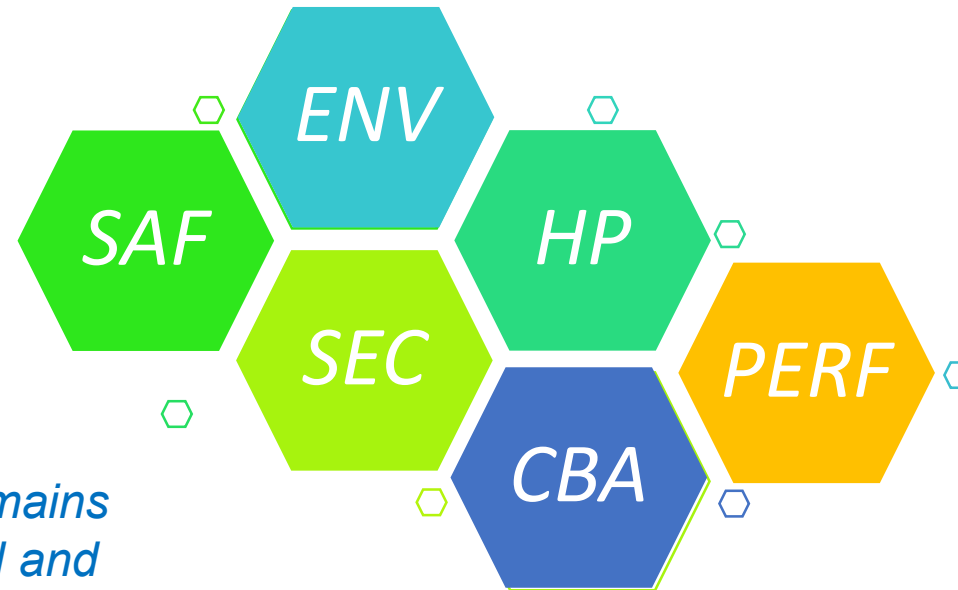
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So you are a SESAR Solution...

- A key part of your work will be to **assess performance impacts**
 - How a new feature would impact the ATM system, including the trade-offs?
- Need for **harmonisation**, in order to allow further **consolidation** of results
- **SESAR Performance Framework** → the common performance language
 - The set of KPIs and PIs per KPAs, together with all the processes and underlying methodologies, that allows to harmonise, compare and consolidate results from different Solutions
- The Program counts on some **transversal areas** dealing with Content Integration, one of which is **Performance Management**

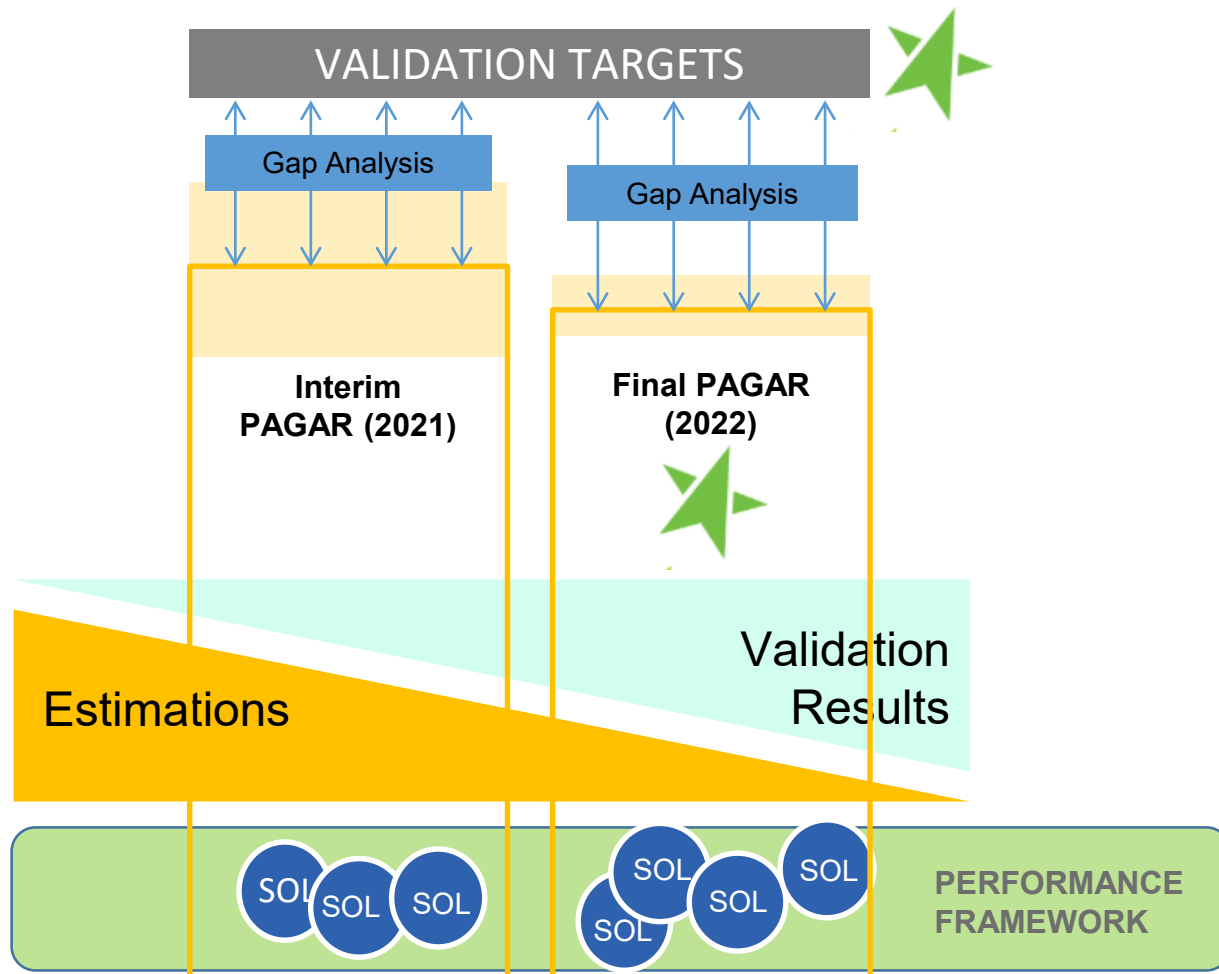
Which is the scope of SESAR Performance?

- 6 performance domains:
 - (Operational) Performance (including most of traditional ATM KPAs)
 - Environment
 - Human Performance
 - Safety
 - (Cyber)Security
 - Cost-Benefit Analysis



*Solid background in all these domains
→ Supporting reference material and
methodologies existing since SESAR1*

The SESAR Performance Workflow



Progressive
Performance
Assessment
refinement

3 main pillars:

- The reference: **Validation Targets**
- The language: **Performance Framework**
- The result: **Performance Assessment and Gap Analysis Report → PAGAR**

The cornerstones: Validation Targets



- Do you know beforehand where do you impact, in terms of ATM performance?
- Validation Targets provide an **a priori estimation** of qualitative performance impacts, based on a specific methodology
- **Handshake** with SESAR Solutions on what KPAs must be assessed → collaborative process



These **Performance Estimations** set a reference for all SESAR Solutions at an early phase of their lifecycle, and their expected relative weight

The cornerstones: SESAR Performance Framework

- The set of KPAs and KPIs that SESAR uses to assess their benefits
- *How is the selection of indicators done?*
 - Different ATM Performance references
 - Indicators must be:
 - **Representative**
 - **Applicable**
 - **Understandable**



Most SESAR validation activities are in Simulation domain → limited data

Every bit counts

[illegible]

- The number of Solutions contributing to a given KPA may be limited
- Achieving the Performance Ambitions is a **distributed effort** → the importance of a **common language**
- Solutions also contribute to ATM performance in different areas than those in the Performance Ambitions



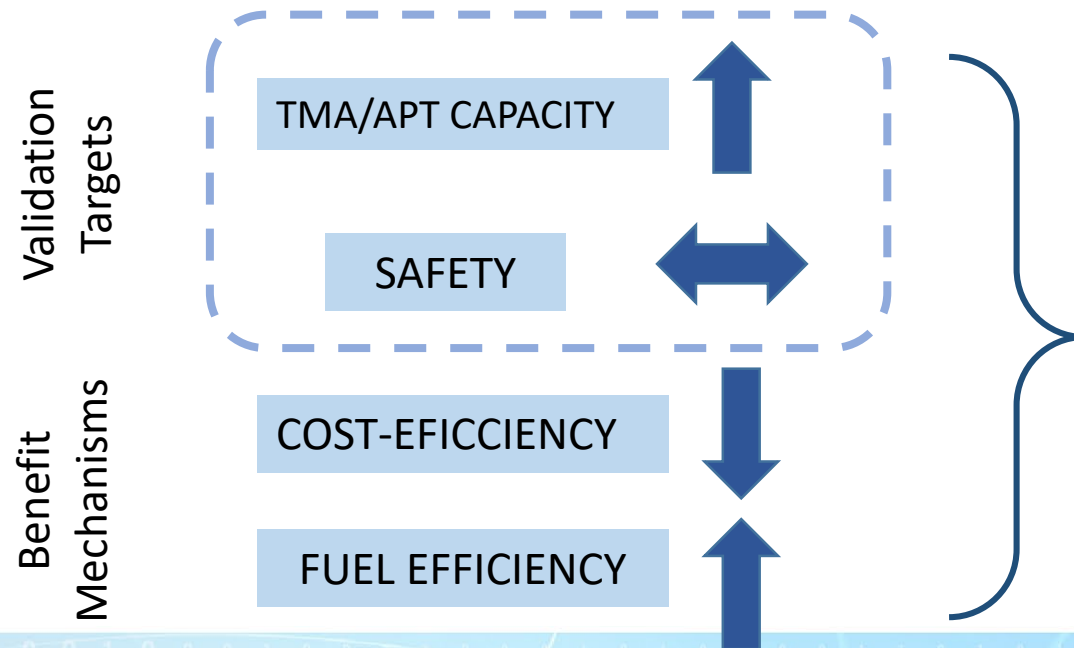
A Solution Performance Lifecycle

- 1 The Solution gets the Validation Targets /Performance Estimations → *What am I impacting, and where?*

- 2 The

SAF	Fuel Eff	APT CAP	TMA CAP	ENR CAP	PRED	PUN	CEF

 Benefit
Mec *Will I assess?*



VALIDATION PLAN

Validation environment
Selection of indicators
Recording the data
Activity Plan,...



	12/18	01/19	02/19	03/19	04/19	05/19	06/19	07/19
Preparation								
Execution								
Analysis								

A Solution Performance Lifecycle

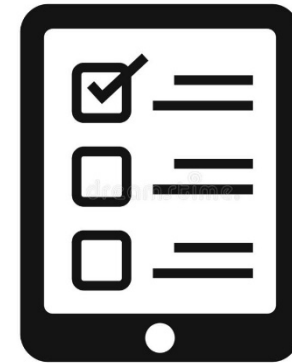
3

The Solution executes the validation activities according to the plan → possible gaps

4

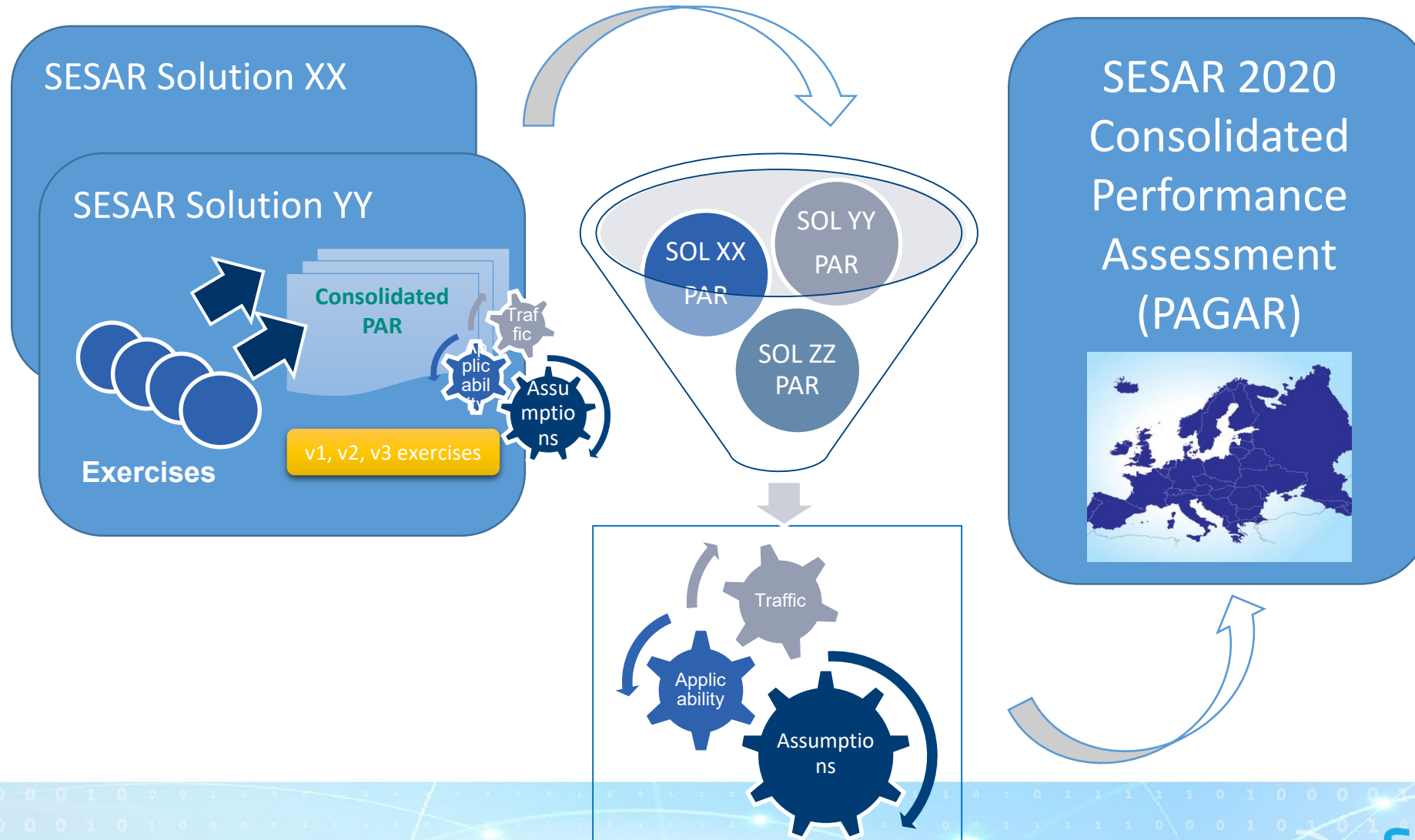


Results and provides a report
and extrapolating results at



performance
on
o “negative

The cornerstones: PAGAR

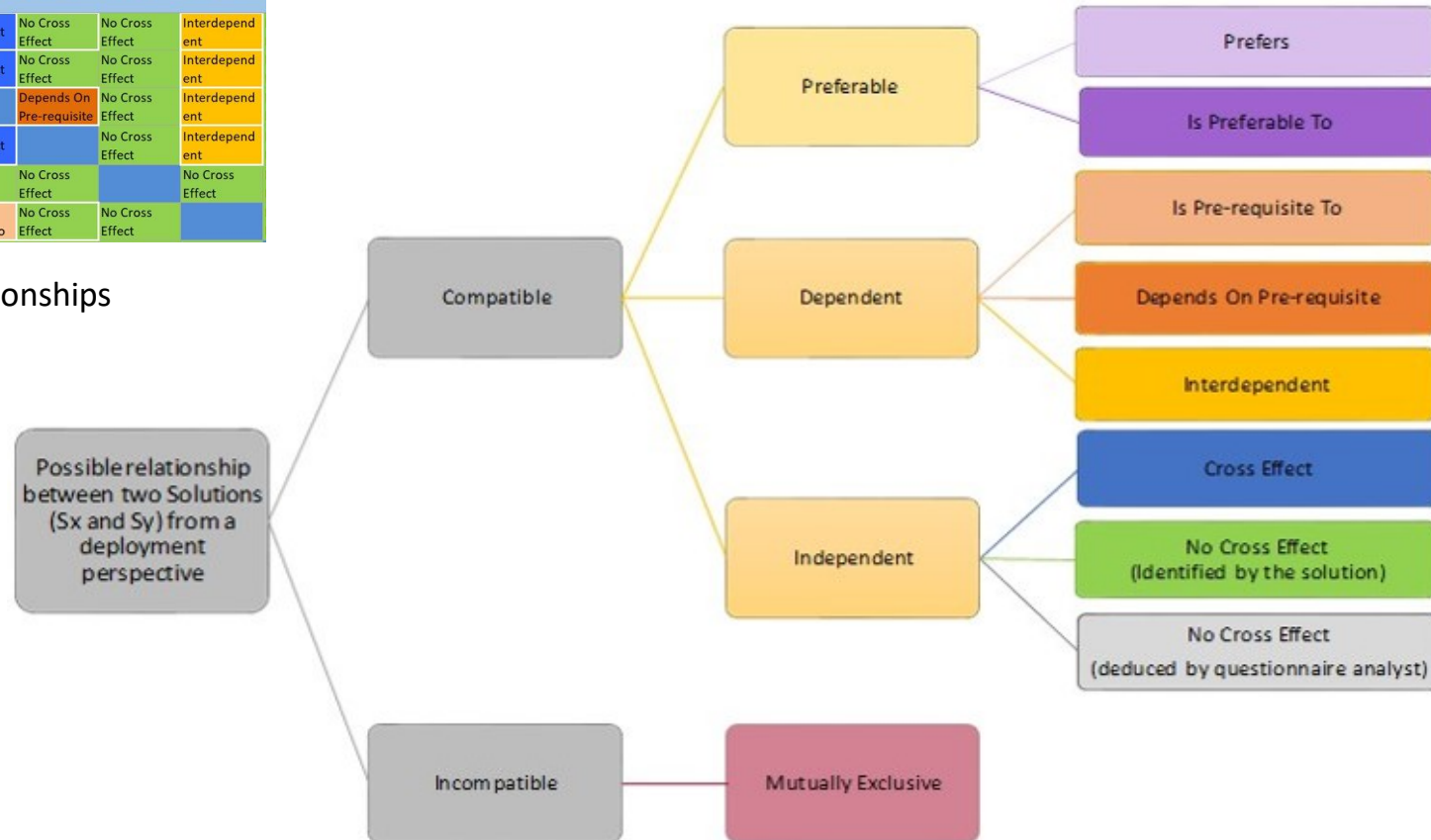


Consolidating Performance

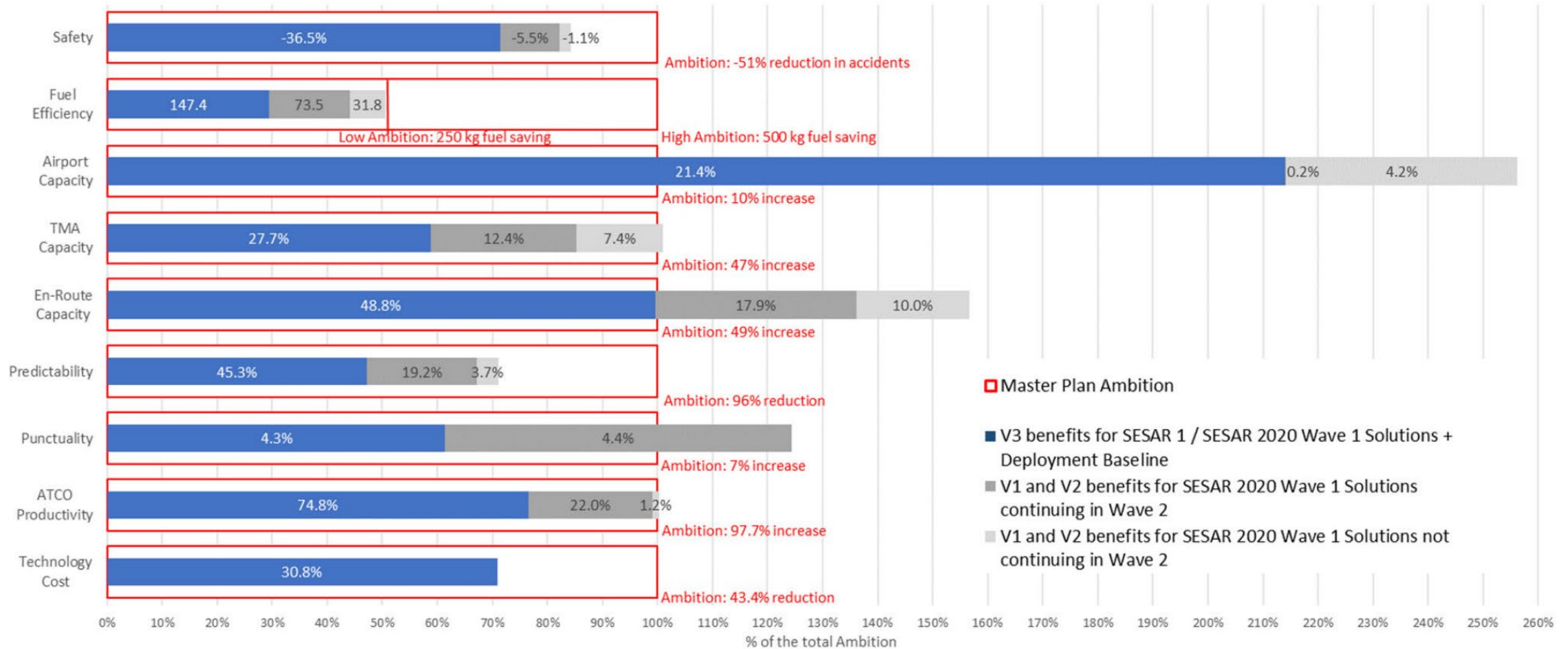
Relationship between Solutions

$\begin{matrix} x \\ y \end{matrix}$	PJ.10-01a	PJ.10-01b	PJ.10-01c	PJ.10-02a	PJ.10-02b	PJ.10-05	PJ.10-06
PJ.10-01b	No Cross Effect		Mutually Exclusive	Cross Effect	No Cross Effect	No Cross Effect	Interdependent
PJ.10-01c	Mutually Exclusive	Mutually Exclusive		Cross Effect	No Cross Effect	No Cross Effect	Interdependent
PJ.10-02a	No Cross Effect	Mutually Exclusive	Depends On Pre-requisite		Depends On Pre-requisite	No Cross Effect	Interdependent
PJ.10-02b	No Cross Effect	Mutually Exclusive	No Cross Effect	Cross Effect		No Cross Effect	Interdependent
PJ.10-05	No Cross Effect	No Cross Effect	No Cross Effect	No Cross Effect	No Cross Effect		No Cross Effect
PJ.10-06	No Cross Effect	Mutually Exclusive	Prefers	Is Pre-requisite To	No Cross Effect	No Cross Effect	

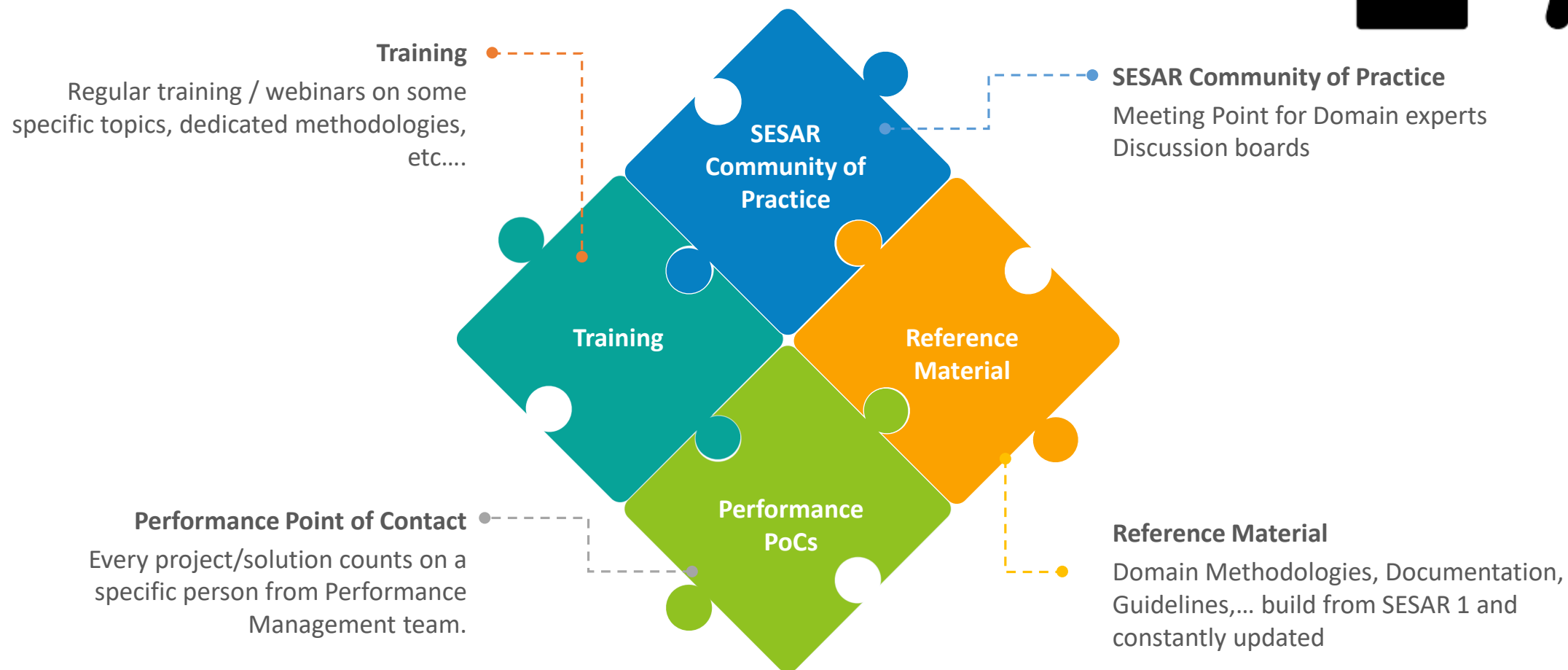
Example of relationships



PAGAR – Where we are?



What is in place to support you?



THANK YOU



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