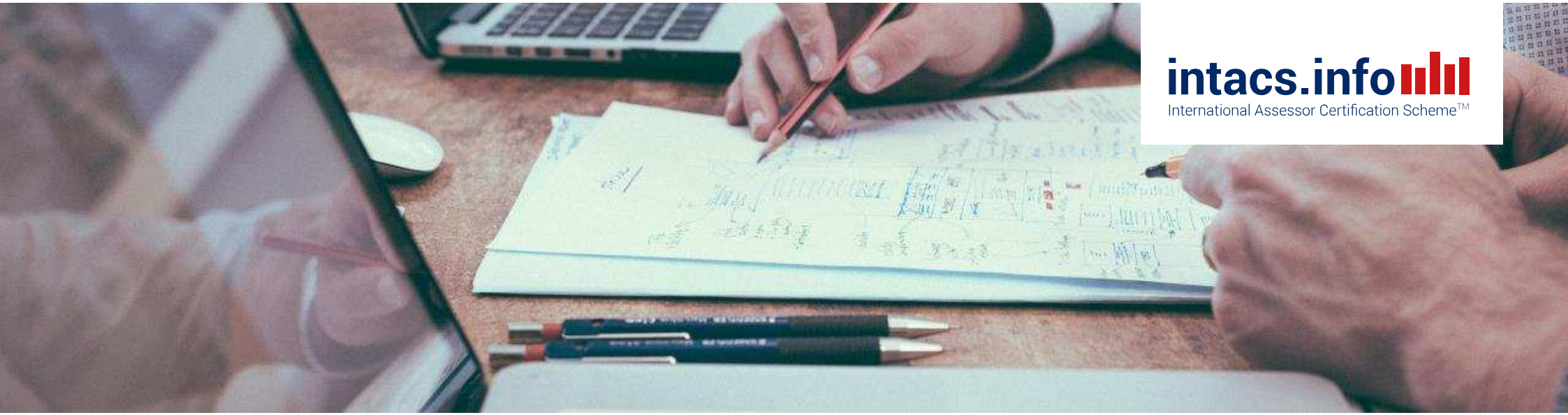

intacs.info
International Assessor Certification Scheme™

The new process improvement expert training module from iNTACS

Presenter: Thomas Wegner on behalf of intacs WG5 Process Improvement

Paper:
An Interpretation of the PIM.3 Process Improvement Process – Results of the iNTACS Process Expert Training Developer Group for PIM.3 (2022) -> New Wiley paper in progress

WG5 - Process Expert training material team PIM.3

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Introduction

The process “Process Improvement” (PIM.3) is part of the assessment model but is still not in the scope of the processes selected by the automotive manufacturers for assessing the suppliers.

The VDA scope, the Fiat Chrysler scope, in fact all scope selections did not select PIM.3 but rather focused on special topics.

On the other hand, it is known that many improvement projects fail.
→ Therefore, it is an interesting question why this process has not been selected so far.

In November 2021, the iNTACS (“International Assessor Certification Scheme e.V.”) established the strategy of a certified process expert training (scheme presentation will be a Keynote by B. Sechser).

Process expert training can be attended by non-assessors and is a pre-training before attending a provisional assessor course.

The idea is to teach the practical understanding of processes and how to implement improvement programs in organisations. This new approach then suddenly highlighted the importance of PIM.3.

Introduction: Process Improvement PIM.3

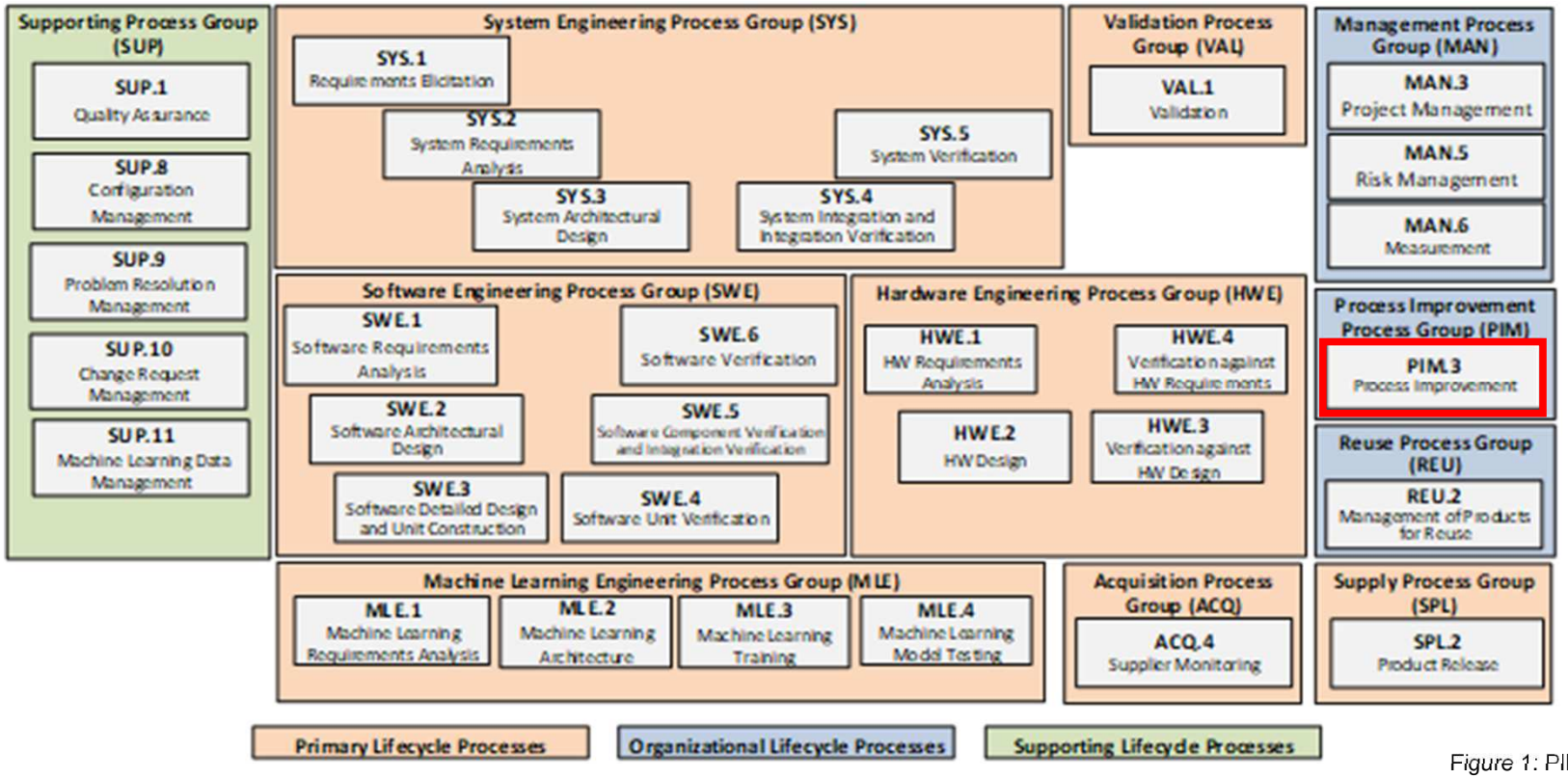


Figure 1: PIM.3 Process – Part of ASPICE 4.0

This new approach then suddenly highlighted the importance of PIM.3.

Introduction

Very few assessors so far assessed PIM.3 up to the capability level 3 and the process expert team developing the content for PIM.3 decided a step-wise approach to elaborate this required knowledge and understanding. The development was done in the following steps (next slide)

Introduction

1. Research and comparison of case studies where process improvement has been successfully implemented. Most examples were contributed by medium and large sized automotive suppliers.

2. Analysis of existing process improvement models which elaborated the success criteria for process improvement.
   a. The SPI Manifesto (SPI Manifesto (eurospi.net))
   b. The ISO/IEC TR 33014 guide for process improvement

3. Joined understanding of PIM.3 base practices (BPs).

4. Joined understanding of level 2 (GPs for PA2.1 Performance Management, PA 2.2 Work Product Management) for PIM.3 effective improvement project implementation.

5. Joined understanding of level 3 (GPs for PA3.1 Process Definition, PA 3.2 Process Deployment) for PIM.3 standard process for running an organization wide improvement program

Understanding Process Improvement by Use Cases

The six shared case studies focused on different aspects:

1. Building high mature platforms and rolling out high mature variants in customer projects. E.g., aggregating components from capability level 3 platforms into capability level 3 application projects for customers *
2. Establishing cross-vision process teams which elaborate joined processes and solutions for the entire organization. **
3. Defining organization wide processes as process releases (like a service project) and establishing tailoring guidelines that make them applicable in different domains in the organization.**
4. What to do and what not to do to create and support process improvement teams.
5. Using data driven and gamification-based approaches to increase the employee motivation to really live the improved process.**
6. Starting the improvement with a lead project and elaborating best practices for a domain and based on the best practices and lessons learned standardize the processes for a cluster of projects in a domain (bottom up).**

* Presented in this session

** More see paper / all see training material

Example(s):

For the case 1 above a paper has been published in EuroSPI 2020 and in the EuroSPI WILEY Special Issue in 2021. The concept described in the papers is outlined in the below figure 2.

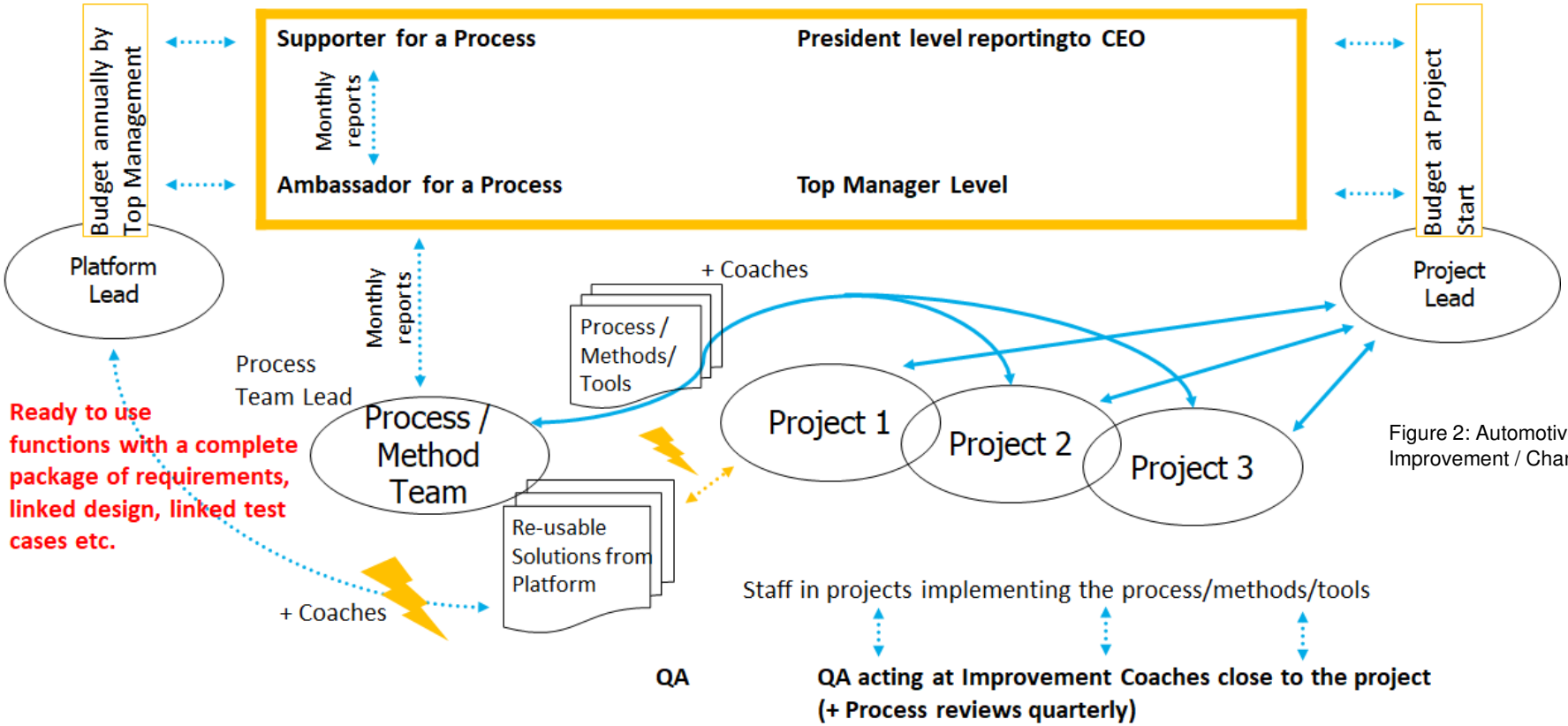


Figure 2: Automotive Specific Improvement / Change Strategy Model

Understanding Base Practices for Process Improvement Example PIM.3 BP.3

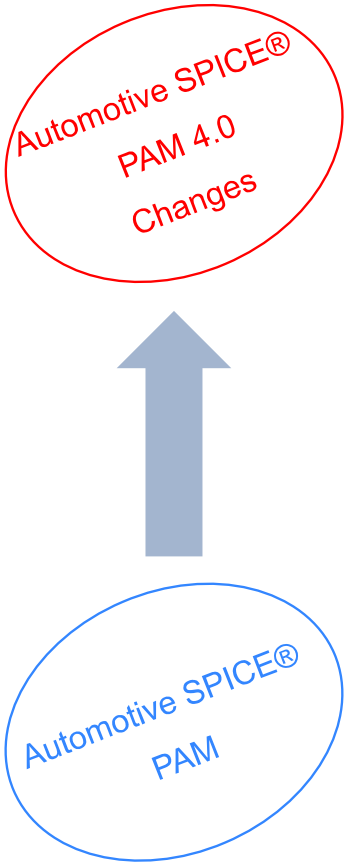
The material shared in the case studies, and the common understanding published in the SPI manifesto and the ISO/IEC TR 33014 guidance for process improvement have been used to explain the base practices.

Base Practice PIM.3.BP3:

1) Establish process improvement goals. Analysis of the current status of the existing process is performed, focusing on those processes from which improvement stimuli arise, resulting in improvement objectives for the processes being established. [OUTCOME 3]

NOTE 5: The current status of processes may be determined by process assessment.

2) Related Outcomes: 08-00 Plan [OUTCOME 2, 4, 7], 15-05 Evaluation report [OUTCOME 2, 3, 4, 5, 7], 15-13 Assessment/Audit report [OUTCOME 3, 5], 15-16 Improvement Opportunity [OUTCOME 2, 3, 4, 7]



Understanding Level 2 of PIM.3

The Generic Practices at Level 2 must be interpreted per process. This is also true for PIM.3 and since very few assessors had done assessments of PIM.3 so far, it was a challenge to share the experiences from improvement programs and agree the correct interpretation.
This resulted in an elaborated understanding of all GP2.x.y generic practices and two example (one in this presentation) results from the working group are shown below.

Generic Practice PIM.3.GP2.1.2:

1) Plan the performance of the process to fulfill the identified objectives. [ACHIEVEMENT b]

Plan(s) for the performance of the process are developed.

The process performance cycle is defined.

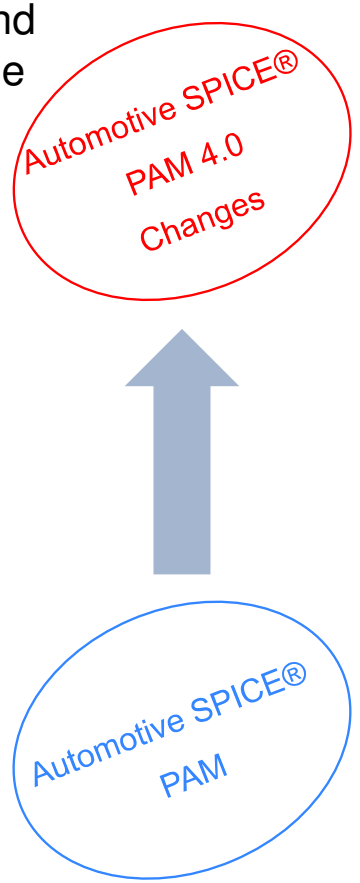
Key milestones for the performance of the process are established.

Estimates for process performance attributes are determined and maintained.

Process activities and tasks are defined.

Schedule is defined and aligned with the approach to performing the process.

Process work product reviews are planned.

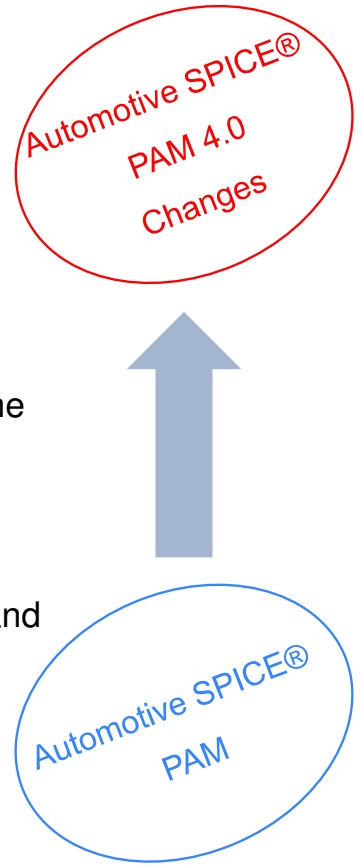


Understanding Level 2 of PIM.3
Example GP2.1.2

Elaborated understanding of process improvement planning of performance:

1. Roadmap for process improvement, including milestones, and releases of processes
2. Plan pilot projects to extract best practices and roll out best practices as a standard
3. Plan gamification strategies / incentive schema to motivate process engineers and quality to support the implementation of new processes
4. Plan the effort of e.g., improvement managers, process teams, process experts, process architects, and the additional effort of engineers to implement the improvement.
5. Set up and plan the effort and goals of cross-division best practice sharing process teams.
6. Plan the effort to establish a process asset library, an environment in which the projects can access, use and share the process assets.
7. Plan improvements to meet the target milestones agreed with top management.
8. Outline how the plan for improvement addresses the targets set out in GP 2.1.1.

Note: Planning is aligned with prioritized process change in BP4-BP5.



Understanding Level 3 of PIM.3

The Generic Practices at Level 3 must also be interpreted per process. This is also true for level 3 of PIM.3 and since very few assessors had done assessments of PIM.3 so far, it was a challenge to share the experiences from improvement programs and agree the correct interpretation.
This resulted in an elaborated understanding of all GP3.x.y generic practices and an example result from the working group is shown below.

Generic Practice PIM.3.GP3.1.1:

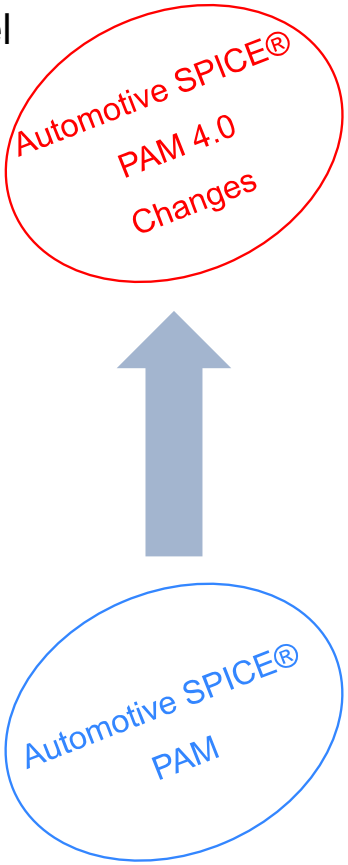
1) Define and Maintain the Standard Process That will Support The Deployment of the Defined Process [ACHIEVEMENT a]

A standard process is developed and maintained that includes the fundamental process elements.

The standard process identifies the deployment needs and deployment context.

Guidance and/or procedures are provided to support implementation of the process as needed.

Appropriate tailoring guideline(s) are available as needed.



Automotive SPICE® v4.0 Changes
New process layout -> BPs

PIM.3 Process Improvement

The purpose of the Process Improvement Process is to continually improve the organization's effectiveness and efficiency through the processes used and aligned with the business need.

Version 3.1	Version 4.0 (yellow book)	Delta
9 BPs	8 BPs	-1

Automotive SPICE® 4.0 Changes
New process layout -> GPs

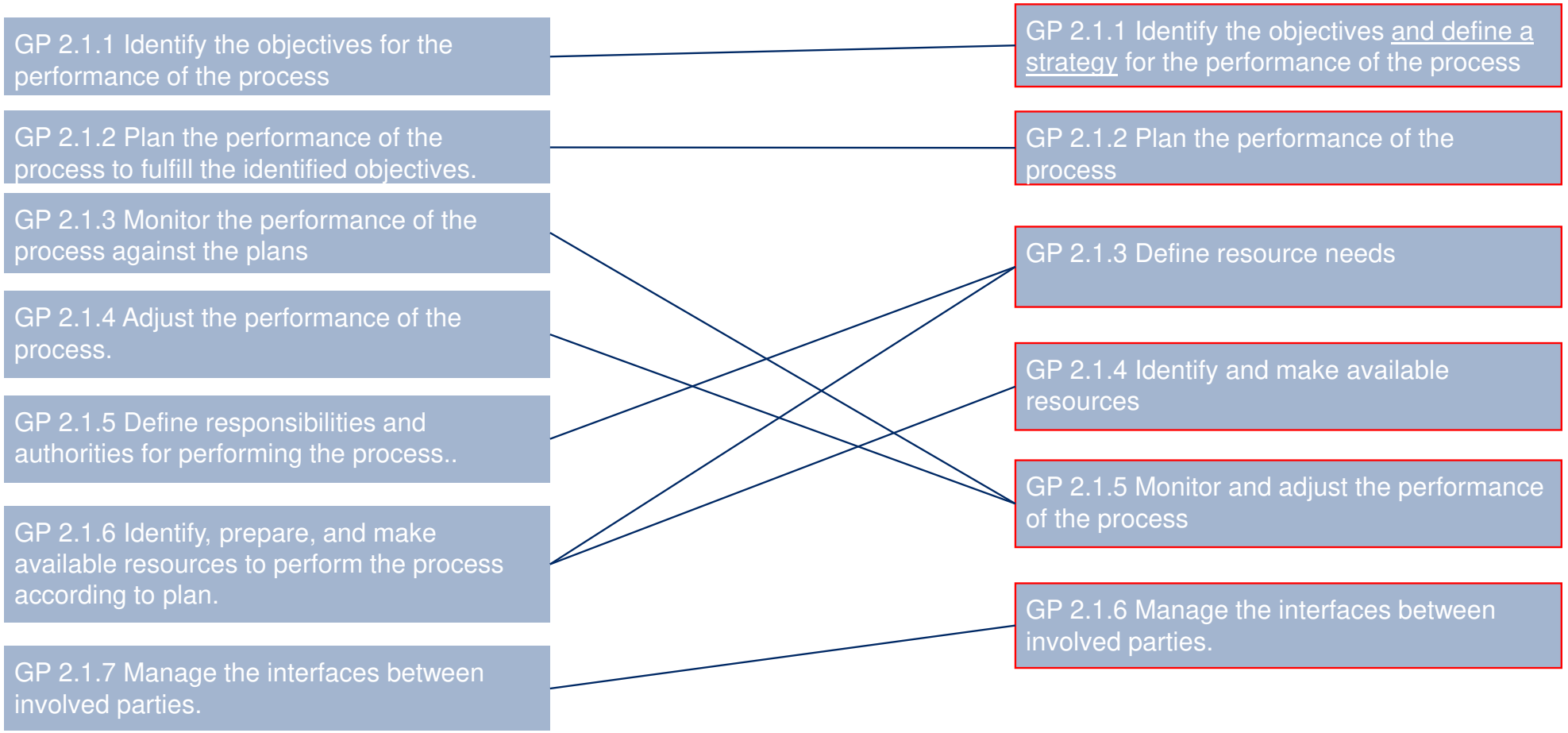
Version 3.1	Version 4.0 (yellow book)	Delta
PA 2.1	**PA 2.1**	
7 GPs	6 GPs	-1
PA 2.2	**PA 2.2**	
4 GPs	4 GPs	-0
PA 3.1	**PA 3.1**	
5 GPs	4 GPs	-1
PA 3.2	**PA 3.2**	-2
6 GPs	4 GPs	

Automotive SPICE® v4.0 Changes
New process layout

- BP1: Establish commitment
- BP2: Identify issues
- BP3: Establish process improvement goals
- BP4: Prioritize improvements
- BP5: Plan process changes.
- .BP6: Implement process changes
- BP7: Confirm process improvement.
- BP8: Communicate results of improvement.
- BP9: Evaluate the results of the improvement project.

- BP1: Establish commitment
- BP2: Identify improvement measures.
- BP3: Establish process improvement goals.
- BP4: Prioritize improvements
- BP5: Define process improvement measures.
- BP6: Implement process improvement measures.
- BP7: Confirm process improvement.
- BP8: Communicate results of improvement.

Automotive SPICE® v4.0 Changes
New process layout



Automotive SPICE® v4.0 Changes
New process layout

GP 2.2.1 Define the requirements for the work products

GP 2.2.2 Define the requirements for documentation and control of the work

GP 2.2.3 Identify, document and control the work products

GP 2.2.4 Review and adjust work products to meet the defined requirements.

GP 2.2.1 Define the requirements for the work products

GP 2.2.2 Define the requirements for storage and control of the work products.

GP 2.2.3 Identify, store and control the work products

GP 2.2.4 Review and adjust work products

Automotive SPICE® v4.0 Changes
New process layout

GP 3.1.1 Define and maintain the standard process that will support the deployment of the defined process.

GP 3.1.2 Determine the sequence and interaction between processes so that they work as an integrated system of processes.

GP 3.1.3 Identify the roles and competencies, responsibilities, and authorities for performing the standard process.

GP 3.1.4 Identify the required infrastructure and work environment for performing the standard process.

GP 3.1.5 Determine suitable methods and measures to monitor the effectiveness and suitability of the standard process.

GP 3.1.1 Establish and maintain the standard process

GP 3.1.2 Determine the required competencies

GP 3.1.3 Determine the required resources.

GP 3.1.4 Determine suitable methods to monitor the standard process.

Automotive SPICE® v4.0 Changes
New process layout

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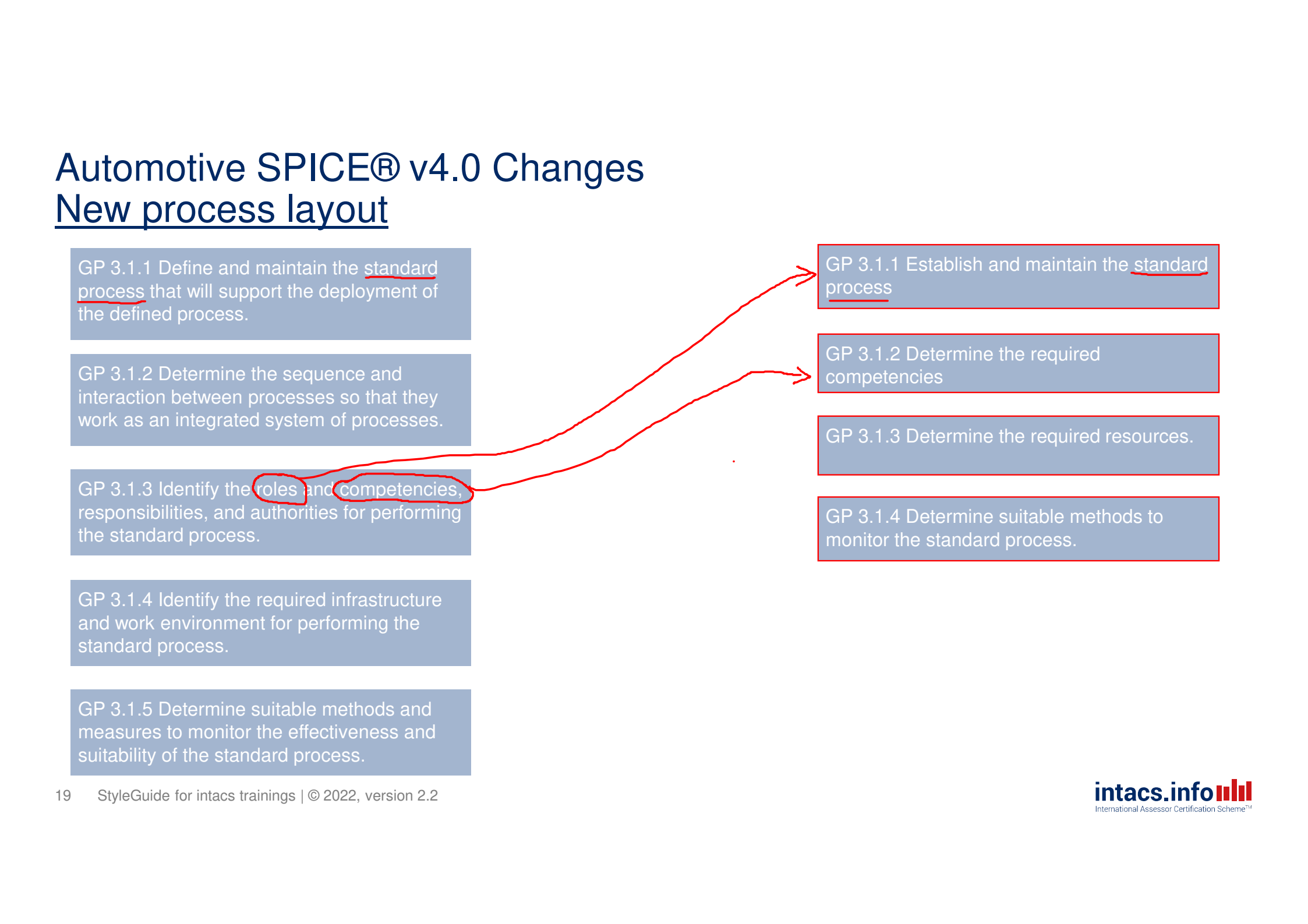

GP 3.1.1 Establish and maintain the standard process

GP 3.1.2 Determine the required competencies

GP 3.1.3 Determine the required resources.

GP 3.1.4 Determine suitable methods to monitor the standard process.

Automotive SPICE® v4.0 Changes
New process layout

GP 3.2.1 Deploy a defined process that satisfies the context specific requirements of the use of the standard process

GP 3.2.2 Assign and communicate roles, responsibilities and authorities for performing

GP 3.2.3 Ensure necessary competencies for performing the defined process.

GP 3.2.4 Provide resources and information to support the performance of the defined process.

GP 3.2.5 Provide adequate process infrastructure to support the performance of the defined process.

GP 3.2.6 Collect and analyze data about performance of the process to demonstrate its suitability and effectiveness

GP 3.2.1 Deploy a defined process that satisfies the context specific requirements of the use of the standard process

GP 3.2.2 Ensure required competencies for the defined roles.

GP 3.2.3 Ensure required resources to support the performance of the defined process

GP 3.2.4 Monitor the performance of the defined process

WHY PIM.3 / SPI is essential?

Discussion (all)

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DO YOU HAVE ANY QUESTIONS?

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