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## Assessment Planning and Execution in System Development Projects

intacs™ Gate4SPICE Event, 12.01.2017 Hamburg

# Agenda

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- **09:30 – 09:45 Welcome and Introduction**
- **09:45 – 10:45 Presentation of the workshop topics**
  - André Zeh / Volker Lehmann: Criteria for assessment schedules
  - Bernhard Sechser: Information needs as input for the assessment schedule and the assessment plan: Do we need a standard template?
- **10:45 – 11:00 Explanation of the working group tasks**
- **11:00 – 12:30 Working groups (part 1)**
- **12:30 – 13:30 Lunch break**
- **13:30 – 14:30 Working groups (part 2)**
- **14:30 – 16:00 Presentation and discussion of working group results**
- **16:00 – 16:30 Closure and Outlook**

## Working Group “Assessor Support“

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### ■ Objectives:

- Offering “added value” to assessors and promoting a strong and growing SPICE Community in each domain
  - Supporting assessors in performing assessments (and other tasks)
  - Supporting communication
    - Continue Gate4SPICE Operation and other qualification events
    - Support of other Assessor Interest Groups
    - Close cooperation with Working Group “Internationalization“, preparation of an extensive “How-To Perform Events” - paper
  - Supporting experience exchange between assessors
    - With meetings and presentation of results on intacs™ Gate4SPICE page
    - Planned for the future: assessor knowledge base and guidelines (WIKI based)

# Working Group “Assessor Support“

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## ■ Planned Events 2017

### ■ Gate4SPICE Workshop (Topic still in discussion)

- Ms. RÜth (Leopold Kostal GmbH & Co. KG), March 7<sup>th</sup>, 2017 in Lüdenscheid

# Working Group “Assessor Support“

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## ■ Possible Events

- Gate4SPICE Workshop “How to comprehend Capability Level 3”
  - What is a standard process?
    - Is it possible to perform Level 3 assessments only for one project?
    - What duration is required for a Level 3 assessment?
  
- Gate4SPICE Workshop “Introduction to TestSPICE“
  - TestSPICE stands for analysis and improvement of test processes
  - Basic ideas and advantages are presented
  
- Gate4SPICE Workshop “Smart Solutions with ASPICE“
  - How to apply the requirements of ASPICE in an efficient way to different project types (small/large, new/legacy)?
  
- Gate4SPICE Workshop “Model Based Development“

## Working Group “Assessor Support“

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### ■ Contact:

- André Zeh (Working Group Lead)
- [Gate4SPICE@intacs.info](mailto:Gate4SPICE@intacs.info)
- [andre.zeh@flecsim.de](mailto:andre.zeh@flecsim.de)



### ■ To all:

- Please think about hosting an event
- Please propose interesting Gate4SPICE topics to advance the knowledge of the SPICE community



## Motivation for this event

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**Projects are getting more and more complex, including not only „simple“ software, but also electronics hardware, mechanics and other disciplines.**

**For all these disciplines at least the management and supporting processes must be evaluated, but typically there is no unique way of doing.**

**Also in the software part very often different teams are working on the defined software components – e.g. a platform team, an application team, a configuration team – but it is not assured that all are using the same processes and tools.**

**How to define a good, efficient and fair assessment schedule for such a heterogeneous constellation?**

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THE UNITED STATES OF AMERICA



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*J. E. Rubin*  
Secretary of the Treasury

ADONIS

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*Anna H. Escamero*  
Secretary of the Treasury

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5

## What do the standards say?

### ■ ISO/IEC 33002:2015:

- A plan for the assessment shall be developed and documented, including at a minimum:
  - ...
  - activities to be performed in performing the assessment;
  - resources and schedule assigned to these activities;
  - ...

### ■ Automotive SPICE®

- says NOTHING at all!





## What does the experience say?

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- One (of several) reasons for HIS scope selection was to allow performance of assessments up to level 2 within one week.



Is this still  
valid for  
current  
projects?

## Assessment schedule relevant aspects

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Local  
constraints  
(language,  
culture)

Assessment  
Scope  
(Processes  
+ Level)

Interview  
time  
limitations

Project  
organization  
(depart-  
ments,  
suppliers)

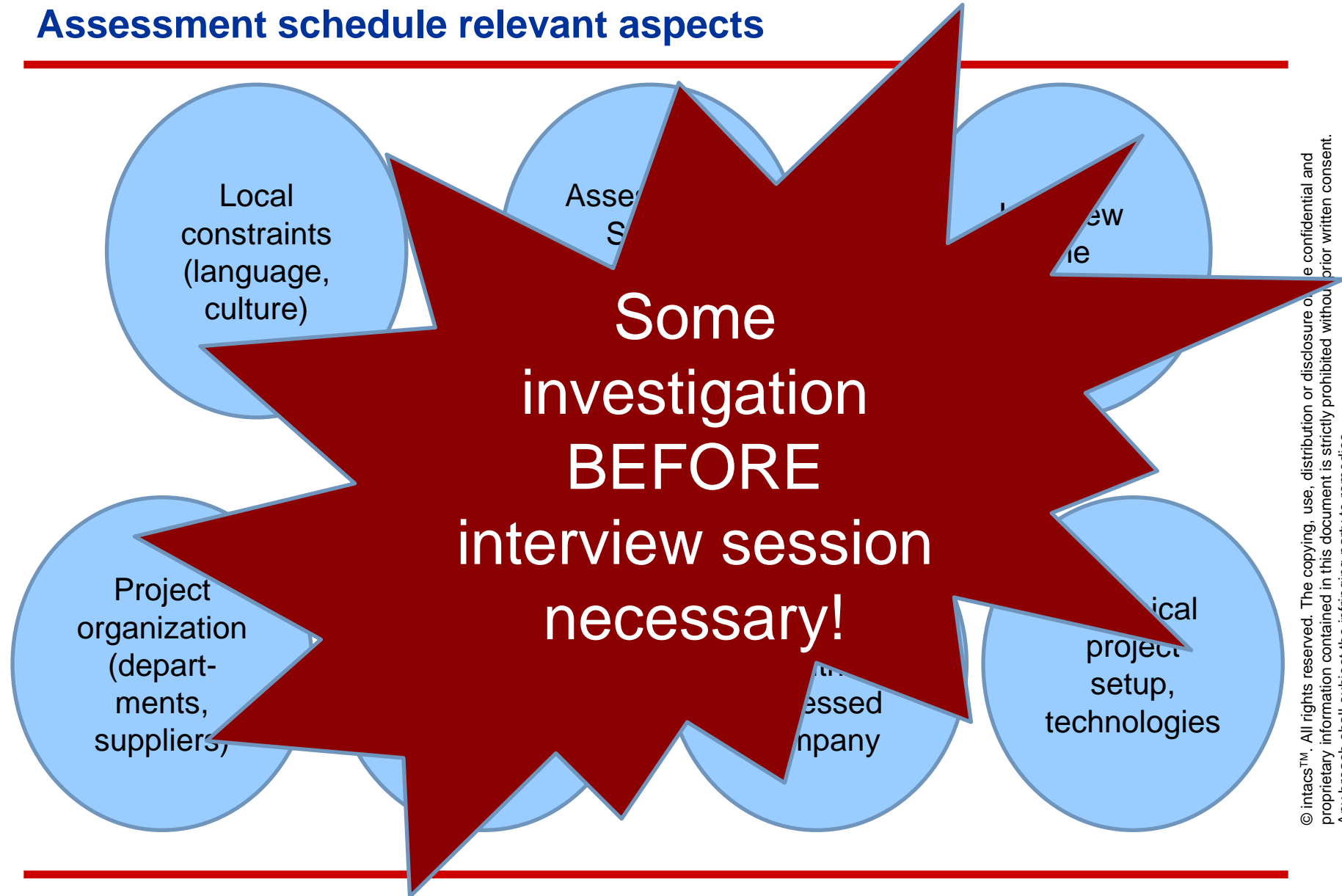
Access to  
team  
members  
(on-site,  
phone, time)

Experience  
of assessors  
with  
assessed  
company

Technical  
project  
setup,  
technologies

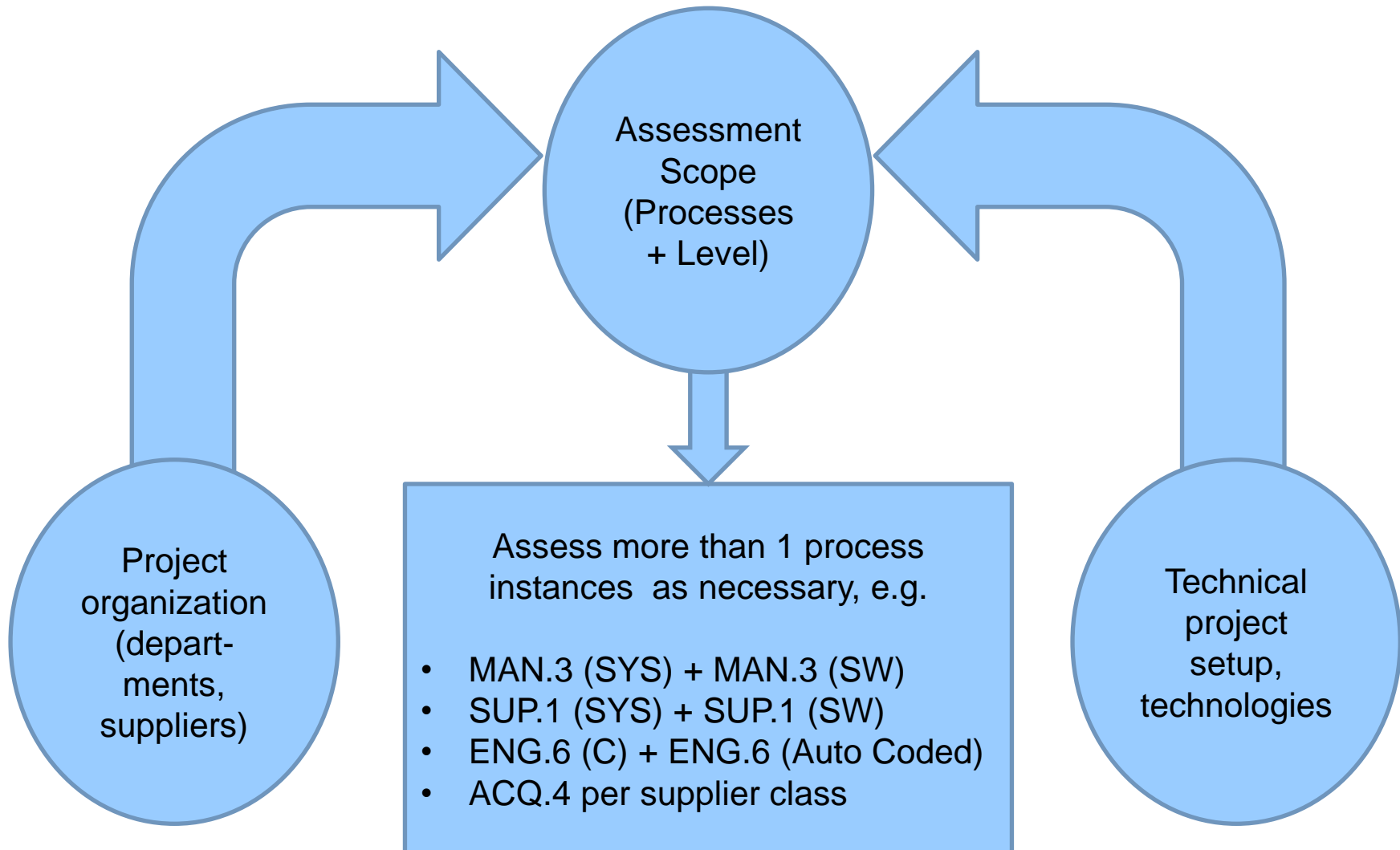
## Assessment schedule relevant aspects

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# How to define the assessment scope



# Typical reasons for assessing multiple process instances

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## ■ ENG.X

- Significant different development approaches for different sub systems
- Usage of different tools or methods

## ■ SUP.9/10

- Different change / error management process for System / SW / HW / ME, often with different tools

## ■ SUP.1

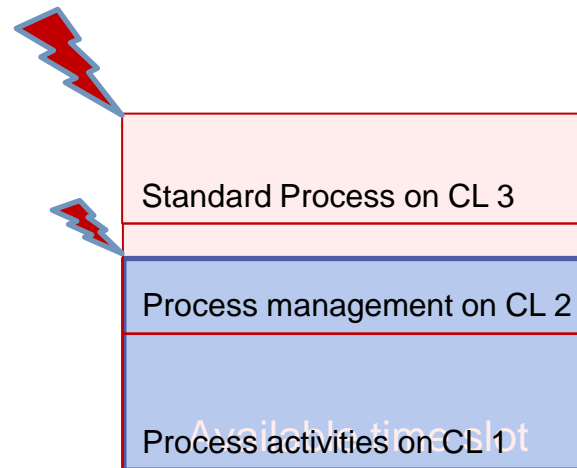
- Spread organizational responsibility

## ■ MAN.X

- Spread organizational responsibility
- Different tool setup
- Different knowledge / background
- Significant different planning detail

# Influence of Capability Levels on assessment schedule

- Usually, a standard time slot is used for planning interviews

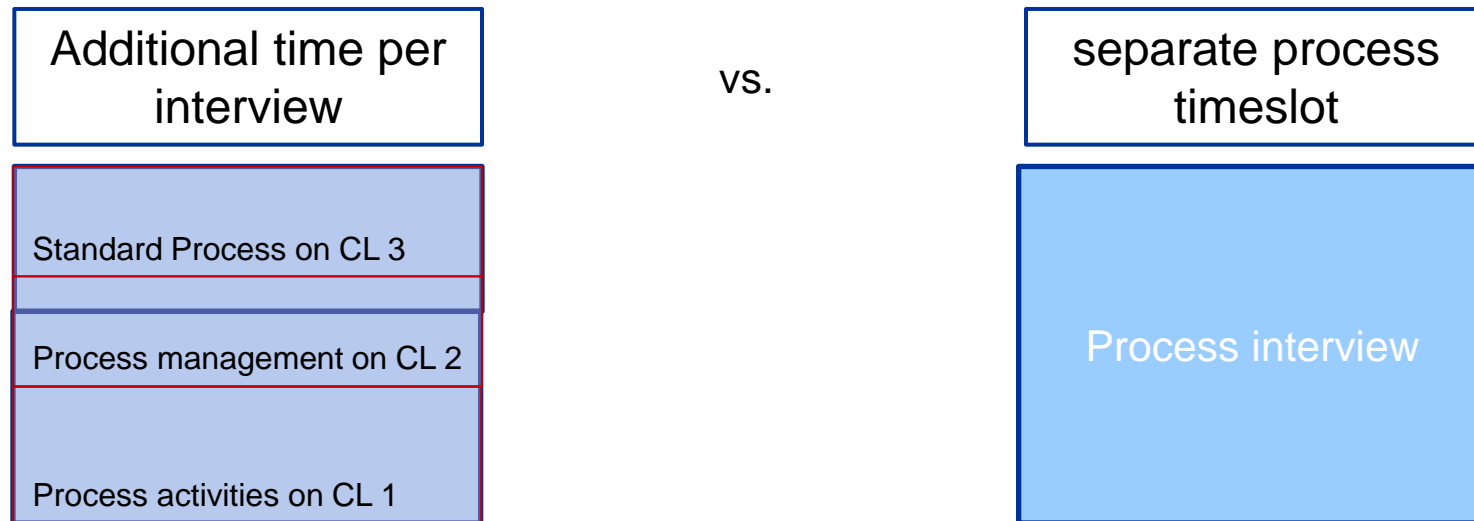


- Which consequences do different CLs have on interviews?



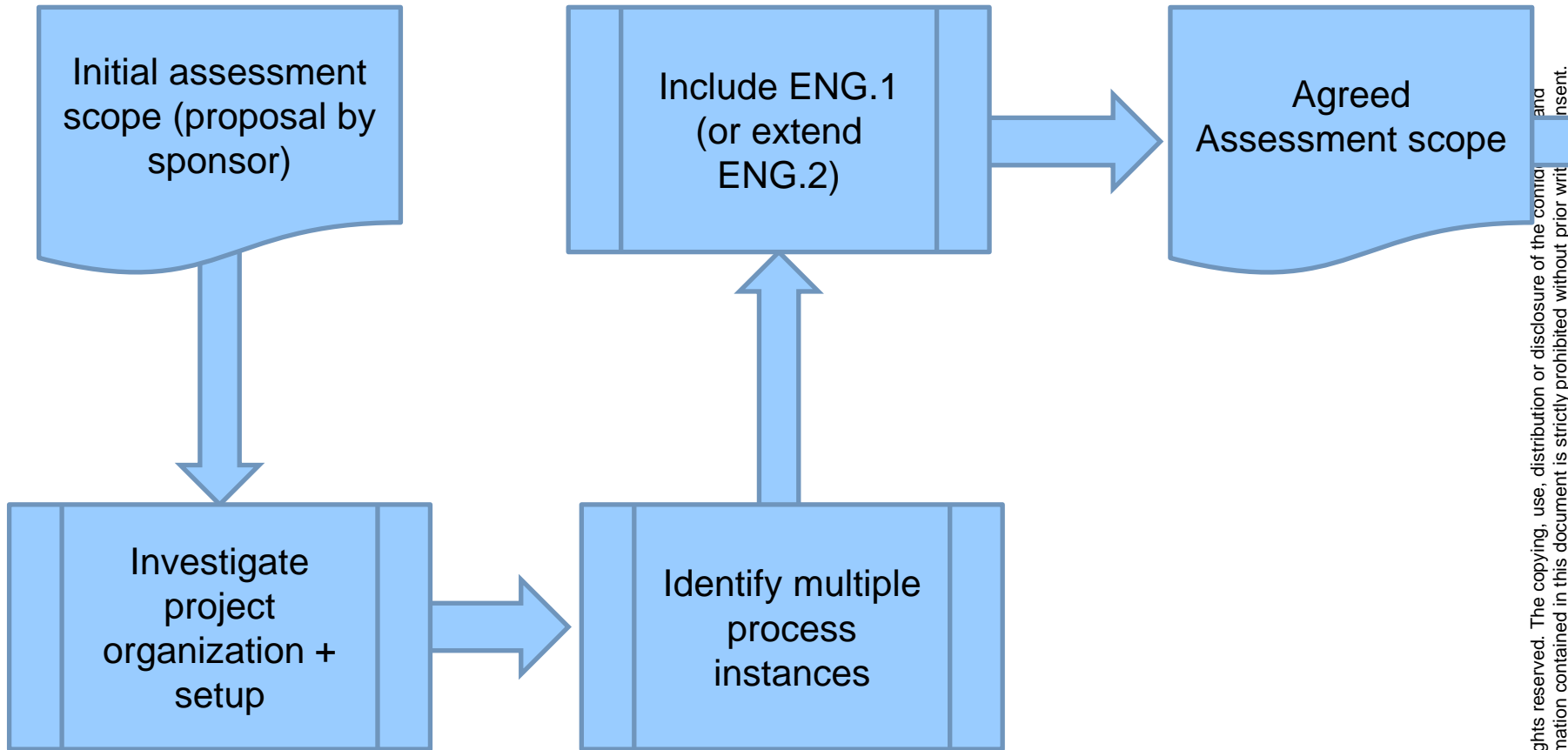
# Influence of Capability Levels on assessment schedule

- Additional activities according to CL 3 are needed



- When to perform which interview?

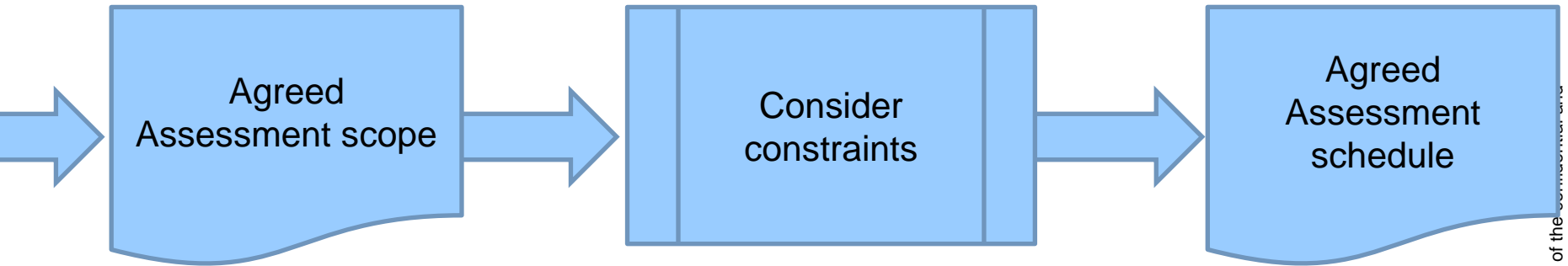
# How to define the assessment scope



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## How to define the assessment scope

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## How to derive the assessment schedule

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Local  
constraints  
(language,  
culture)

Assessment  
Scope  
(Processes  
+ Level)

Interview  
time  
limitations

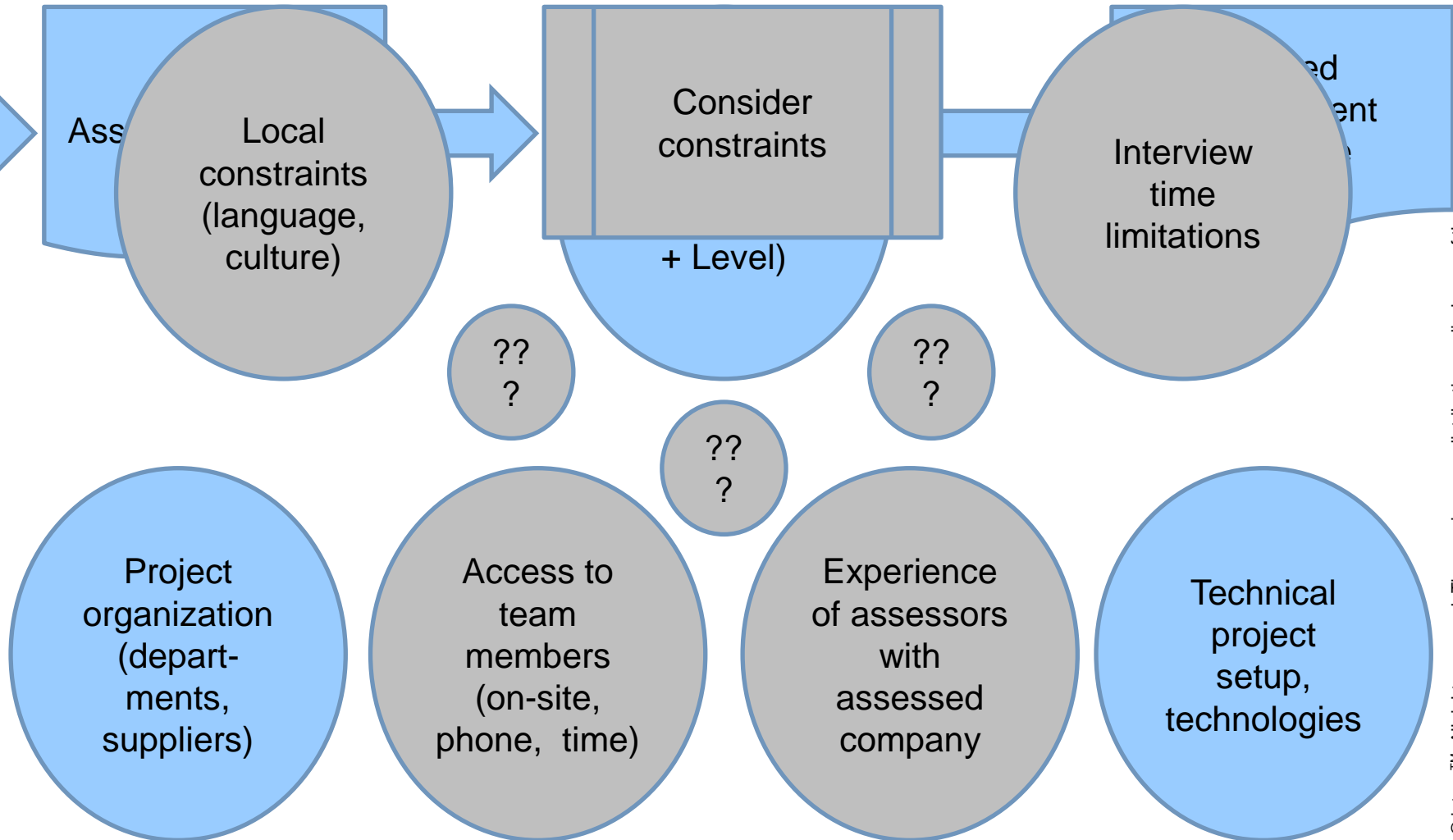
Project  
organization  
(depart-  
ments,  
suppliers)

Access to  
team  
members  
(on-site,  
phone, time)

Experience  
of assessors  
with  
assessed  
company

Technical  
project  
setup,  
technologies

# How to derive the assessment schedule



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## Constraints to be considered for assessment schedule

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- **Local constraints (language, culture)**
- **Access to team members (on-site, phone, time, availability)**
- **Experience of assessors with assessed company**
- **Interview time limitations**

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# Typical topics and their influence on assessment planning (1)

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- **Assessment sponsor** (external, internal, ...)
- **Assessment purpose** (process understanding, supplier selection, process improvement and progress, prove maturity to customers, ...)
- **Assessment types** (A-D, independency, involved bodies, ...)
- **Assessment classes** (1-3, influence on process instances, ...)
- **Assessment model** (ASPICE v2.5 & v3.0, other domains, ...)
- **Assessment scope** (organizational units, application domain, involved & excluded projects, key characteristics, selected processes, process instances, target capability profile, ...)



# Typical topics and their influence on assessment planning (2)

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- **Constraints & risks** (quantity and type of objective evidence, availability of resources, time, language, remote or local, confidentiality, ownership of results, changes to assessment team/interviewees/purpose/scope,...)
- **Assessment team** (roles, qualification, mini-teams, how many assessors?)
- **Conformance clarification** (by whom?)
- **Additional information** (Specific data/metrics, assessment effort, non-model related findings, customer specific model demands, ...)

# Which kind of template is necessary and useful?

|  |  |                                 |                            |                            |
|--|--|---------------------------------|----------------------------|----------------------------|
| <b>Company</b>   | <b>Name</b>  | <b>Address</b>                  |                            |                            |
| <b>Location</b>  | ToDo   |                                 |                            |                            |
| <b>Department</b>  | ToDo   |                                 |                            |                            |
| <b>Application Domain</b>  | ToDo   |                                 |                            |                            |
| <b>Date</b>  |  |                                 |                            |                            |
| <b>Project Name</b>  | ToDo   |                                 |                            |                            |
| <b>Project description (including key characteristics, i.e. complexity, criticality)</b> |  |                                 |                            |                            |
| <b>Project start</b>   |  |                                 |                            |                            |
| <b>Planned project end</b>   |  |                                 |                            |                            |
| <b>Number of staff in project</b>  |  |                                 |                            |                            |
| <b>Number of software engineers in project</b>   |  |                                 |                            |                            |
| <b>Assessment Language</b>   |  |                                 |                            |                            |
| <b>Report Language</b>   |  |                                 |                            |                            |
| <b>Report Form (i.e. Word, PPT, short, long)</b>   |  |                                 |                            |                            |
| <b>Suppliers</b>   | <b>Company / Dept.</b>   | <b>Address / Phone / e-mail</b> | <b>Topic / Subsystem</b>   |                            |
| <b>Supplier 1</b>  |  |                                 |                            |                            |
| <b>Supplier 2</b>  |  |                                 |                            |                            |
| <b>Supplier 3</b>  |  |                                 |                            |                            |
| <b>Supplier 4</b>  |  |                                 |                            |                            |
| <b>Assessment Purpose</b>  |  |                                 |                            |                            |
| <b>Motivation of the Assessment Sponsor</b>  |  |                                 |                            |                            |
| <b>Assessment Approach</b>   |  |                                 |                            |                            |
| <b>Assessment Roles</b>  | <b>Name</b>  | <b>Company</b>                  | <b>e-mail</b>              | <b>Phone</b>               |
| <b>Assessment Sponsor</b>  |  |                                 |                            |                            |
| <b>Assessment Coordinator</b>  |  |                                 |                            |                            |
| <b>Competent Assessor</b>  |  |                                 |                            |                            |
| <b>Assessor 2</b>  |  |                                 |                            |                            |
| <b>Assessor 3</b>  |  |                                 |                            |                            |
| <b>Assessor 4</b>  |  |                                 |                            |                            |
| <b>Assessment Scope</b>  |  |                                 |                            |                            |
| <b>Process Assessment Model</b>  |  |                                 |                            |                            |
| <b>Process Reference Model</b>   |  |                                 |                            |                            |
| <b>Scope</b>   |  |                                 |                            |                            |
| <b>Process</b>   | <b>Level</b>   |                                 |                            |                            |
| <b>Interview partner</b>   | <b>Roles</b>   | <b>Interview partner 1</b>      | <b>Interview partner 2</b> | <b>Interview partner 3</b> |
| <b>Process</b>   |  |                                 |                            |                            |
| <b>Assessment Constraints</b>  |  |                                 |                            |                            |
| <b>Confidentiality</b>   | NDA will apply.  |                                 |                            |                            |
| <b>Owner of Assessment output</b>  | The assessment output will be owned by the Assessment Sponsor. |                                 |                            |                            |

# Which kind of template is necessary and useful?

| Agenda                     | Day | Start | End | Room | Assessors | Management | Project Team | Roles |
|----------------------------|-----|-------|-----|------|-----------|------------|--------------|-------|
| Assessor Briefing          |     |       |     |      |           |            |              |       |
| Kickoff Meeting            |     |       |     |      |           |            |              |       |
| Interviews by Process Area |     |       |     |      |           |            |              |       |
| Sponsor Meeting            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
|                            |     |       |     |      |           |            |              |       |
| Assessor Briefing          |     |       |     |      |           |            |              |       |
| Team Feedback              |     |       |     |      |           |            |              |       |
| Report Preparation         |     |       |     |      |           |            |              |       |
| Assessor Briefing          |     |       |     |      |           |            |              |       |
| Result Presentation        |     |       |     |      |           |            |              |       |

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# Which kind of template is necessary and useful?

## Automotive SPICE® Assessment

### Assessment Report

Assessed Company: **Company GmbH**  
 Musterstrasse 77  
 99999 Musterstadt  
 Germany

Project: Project

Project Category: Category

Assessment Date: December 9<sup>th</sup> – 13<sup>th</sup>, 2016

Process Assessment Model: Automotive SPICE® PAM v2.5

Sponsor: Sponsor (Company GmbH)  
 Lead Assessor: Bernhard Sechser (Method Park Consulting GmbH)

Author: Bernhard Sechser  
 Method Park Consulting GmbH  
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 91058 Erlangen  
 Germany  
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 bernhard.sechser@methodpark.de  
 www.methodpark.de

Report Version: 1.0  
 Report Status: Draft  
 Report Date: February 26<sup>th</sup>, 2016

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## Workshop tasks

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### ■ Working Group 1: Assessment scope and needed input

- Find more reasons for assessing multiple process instances.
- Find reasons for avoiding multiple process instances.
- Describe approaches to find out relevant process instances during assessment planning phase.
- Provide needed input for assessment planning.
- Provide template for assessment planning.

### ■ Working Group 2: Assessment schedule

- Extend list of constraints to be considered when defining interview times.
- Provide rules of thumb for interview times depending on criteria.
- Provide additional activities for higher level assessments

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For improvement  
suggestions or critique  
please use the ticketing  
system on [www.intacs.info](http://www.intacs.info)



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Thank you for your attention.

Do you have any questions?