

Enterprise SPICE®

A Domain Independent Integrated Model for Enterprise-wide Assessment and Improvement

Linda Ibrahim

Enterprise SPICE Project Leader
Co-Chair Enterprise SPICE Advisory
Board
US Federal Aviation Administration

Antanas Mitasiunas

Enterprise SPICE Advisory Board
Vilnius University



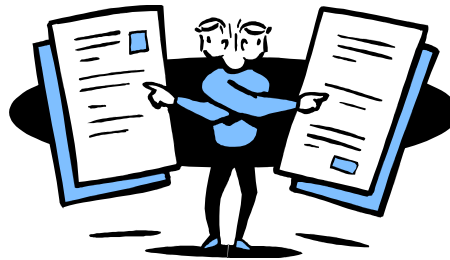
Presented at Bonita event, Latvia, November 2011

Topics

- Background – problem and context
- What is SPICE
- What is Enterprise SPICE
- Project Phases
- Scope and Summary of Initial Release
- Using Enterprise SPICE
- Next Steps

Background – the Problem

- Suppose you want/need to improve performance across your enterprise
 - There are many improvement models, standards, approaches
 - Each might help with part of the business
 - Using several separately can be expensive, confusing, ineffective
- How can an enterprise reap benefits of knowledge in a bewildering variety of standards, models and approaches?
- How can this be done efficiently and effectively?



Our Solution

Integration and Harmonization:

We propose that various models, standards, approaches be integrated and harmonized into a single enterprise model ...called

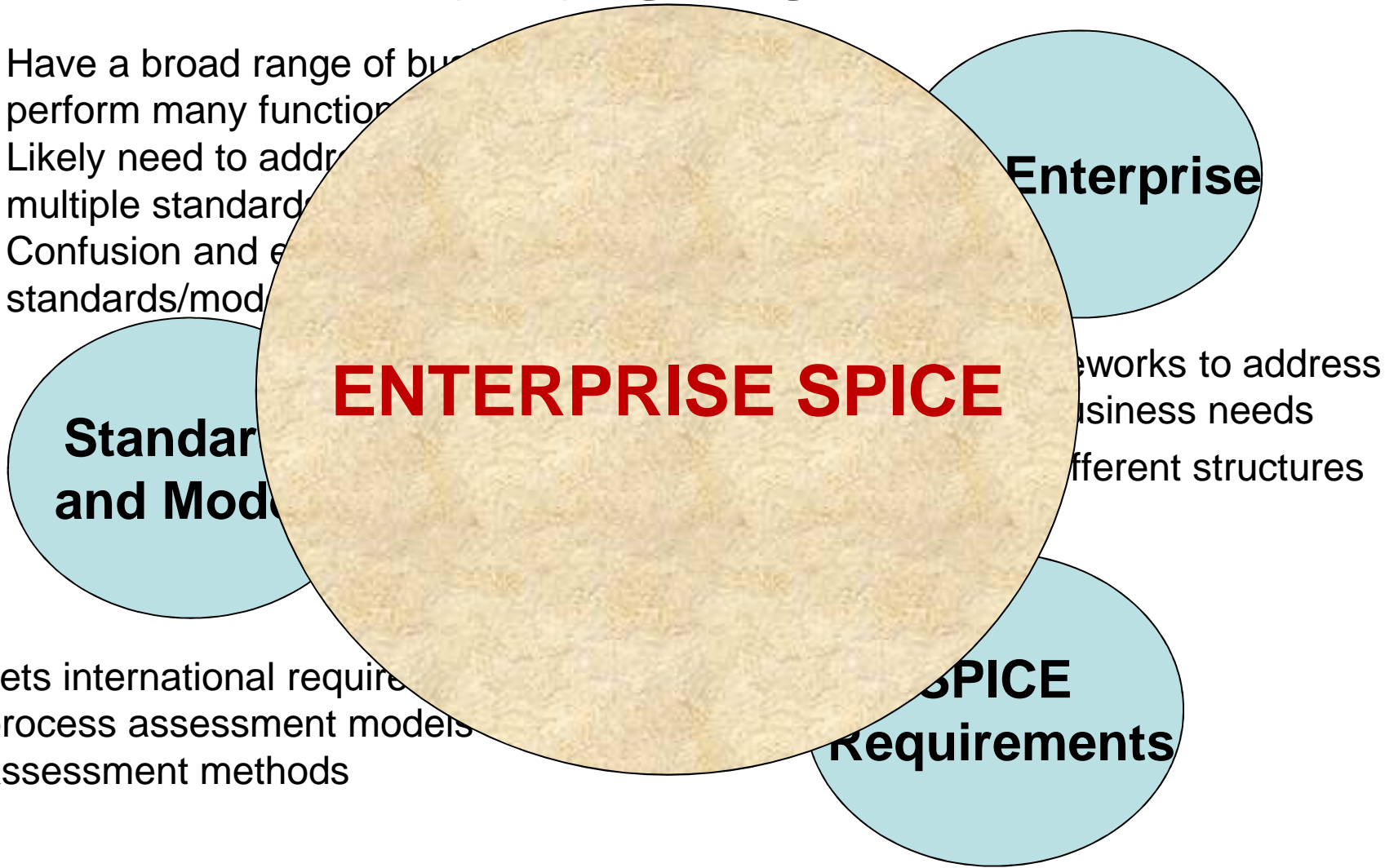
Enterprise SPICE

This presentation:

Describes this proposed solution as being implemented by the Enterprise SPICE project.

Process Standards, Enterprises, and SPICE

- Have a broad range of business functions and perform many functions
- Likely need to address multiple standards
- Confusion and error with multiple standards/models



What is SPICE?

ISO/IEC 15504 – *Information Technology – Process Assessment (SPICE)* is the international standard setting requirements for:

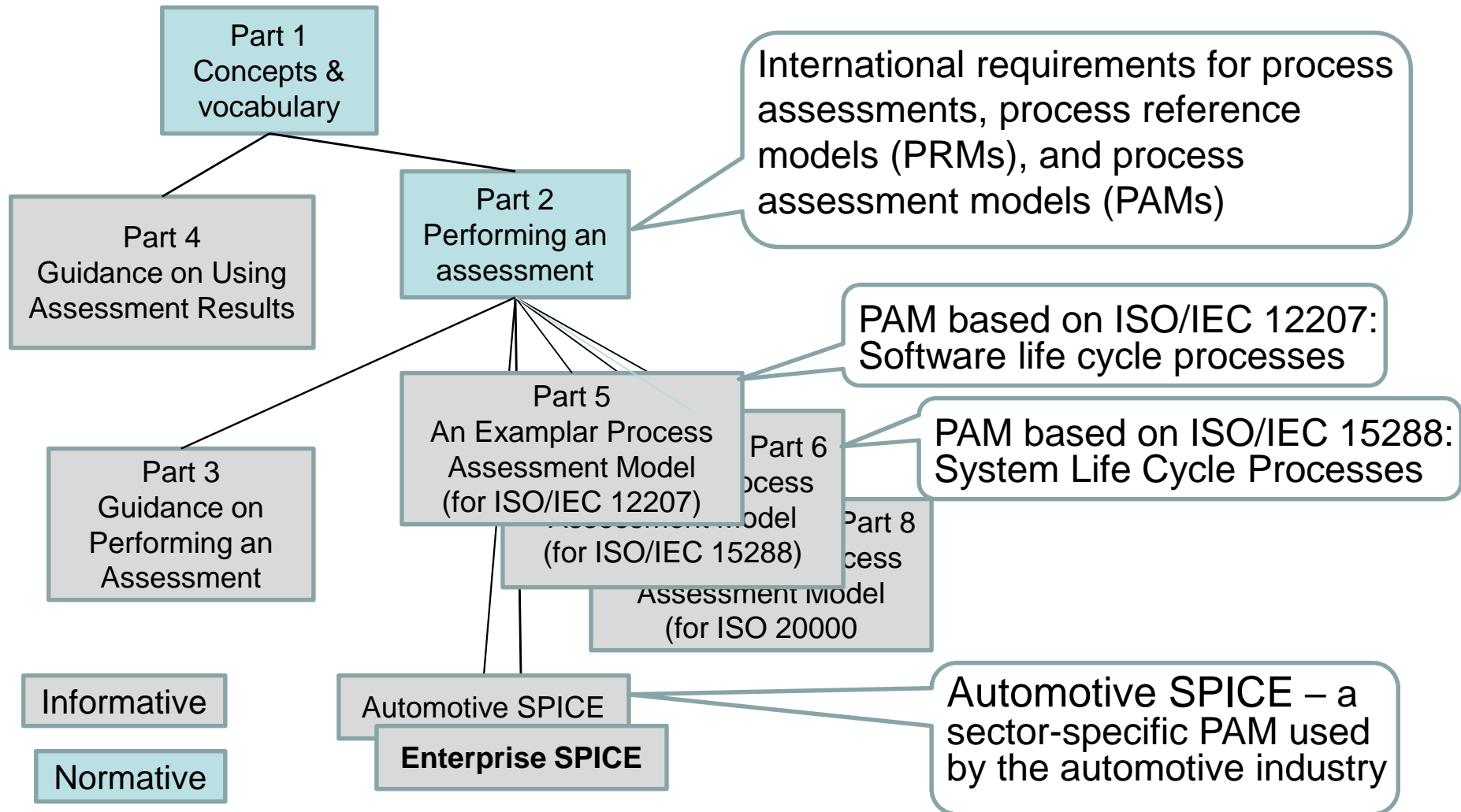
- assessment methods, and for
- models used for assessing process capability

SPICE originally stood for **S**oftware **P**rocess **I**mprovement and **C**apability **d**etermination

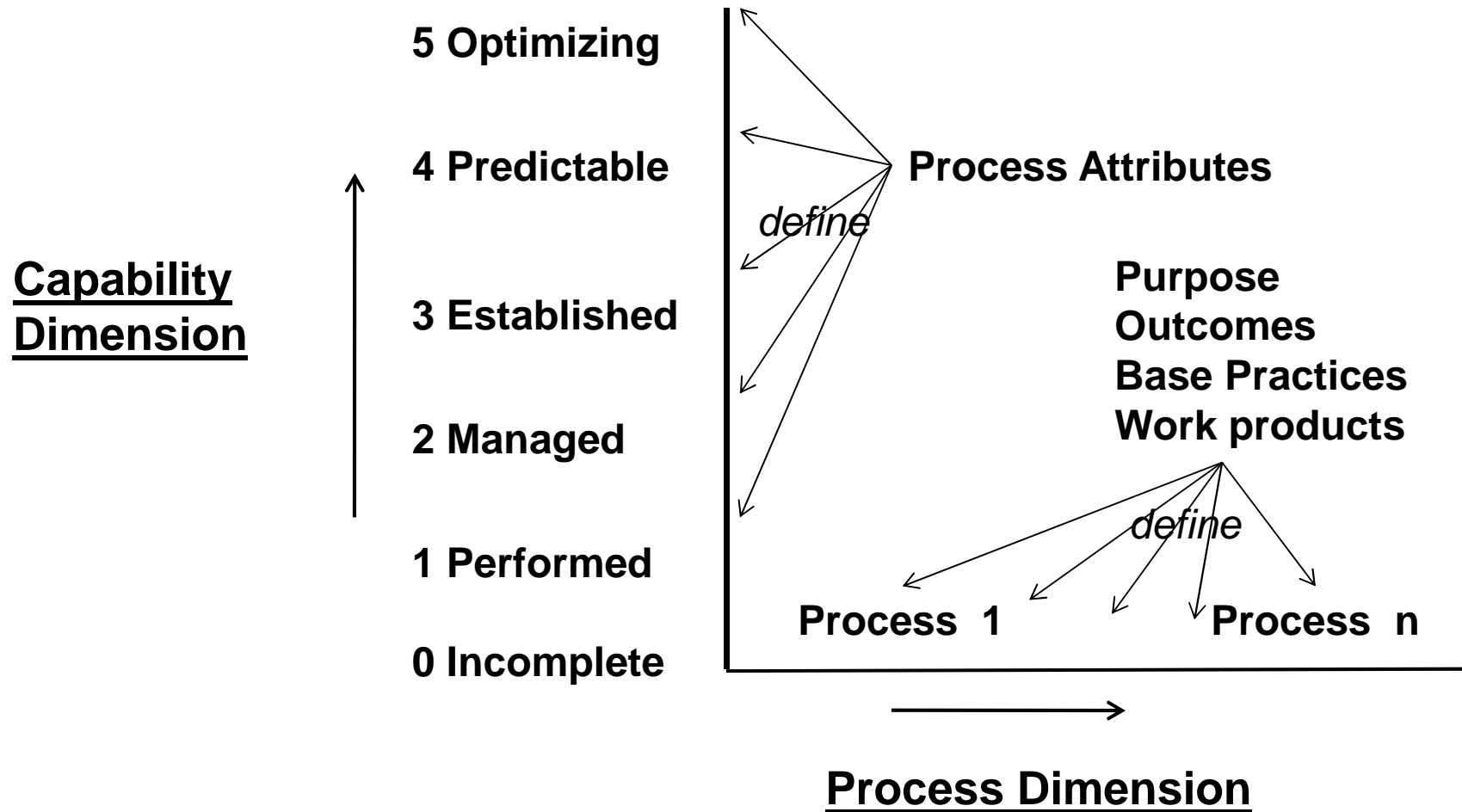
- Originally ISO/IEC 15504 was a software-specific standard
- The “S” now stands for “Software, System, and Service”
- Scope has been broadened to address any disciplines



ISO/IEC 15504



Structure of SPICE Conformant Models



Benefits to Stakeholders

- **Single Unified Model:** no need to use many separate standards/models
- **Pick and Choose:** select areas relevant to the business
- **Authoritative and Robust:** from widely recognized standards and sources, with mapping to sources
- **Comprehensive:** broad, expanding, range of disciplines
- **Synergized:** each source contributes important perspectives
- **Reduced Costs:** for training, improvement, assessment, simultaneous ratings/certification vs. one model
- **Enhanced Effectiveness:** via integrated guidance across the enterprise
- **Certification:** certification services from accredited bodies

The Enterprise SPICE Project

- First proposed, SPICE 2006 in Luxembourg
- Formally launched, SPICE 2007 in Seoul, Korea



Project Structure

- Sponsor: SPICE User Group
- Advisory Board: governs project
 - 15 members voted in every 2 years ●
- International Project Leader
- Volunteer Participants in various roles (board member, author, assessor, reviewer, ...)
 - Over 120 project participants from 31 ● countries

Project Phases

Enterprise SPICE is being carried out in 3 phases:

- **Phase 1: Initial Release:** Development of initial Enterprise SPICE Process Assessment Model (*completed*)
- **Phase 2: Deployment and Usage:** Communications, Training, Guidance Documents, Structured Feedback Mechanisms, Partnerships, Assessment Oversight, Interest Groups, Tool Support, ... (*in progress*)
- **Phase 3: Subsequent Releases:** further enhancements and improvements (*as we proceed*)

Development of Initial Release

2008

- Draft Enterprise SPICE Process Reference Model (PRM) developed and distributed for international stakeholder review
- Over 400 comments received and addressed

2009

- Draft Enterprise SPICE Process Assessment Model (PAM) (process dimension) developed and distributed
- Over 500 comments received and addressed
- Some trial assessments conducted

2010

- Initial release published and ready for use

Scope – Sources and References

Stakeholders determined material to be integrated.

Sources:

FAA-iCMM is baseline source *(already integrating ISO 9001, ISO/IEC 12207, ISO/IEC 15288, ISO/IEC 15504, MBNQA, CMMI, EIA 731, previous CMMs, MIL-STD-882C, MIL-STD-882D, IEC 61508: DEF STAN 00-56, ISO 17799, ISO 15408, ISO/IEC 21827, NIST 800-30).*

Plus: ITIL v3; ISO/IEC 20000; CobIT v4.1; People-CMM; ITIM, ISO 14001, CMMI-SVC.

References: ISO 31000, eSCM-CL, eSCM-SP, PMI Standard for Portfolio Management, PMBOK, and FEA Practice Guidance.

Summary of Content

Enterprise SPICE provides the process dimension of the Process Assessment Model

Categories: 29 processes in 4 categories:

- Governance/Management – processes that set direction and oversee execution of other processes.
- Life Cycle – processes that cover typical life cycle of a product or service.
- Support – processes that contribute to success and quality of all processes.
- Special Applications – provide ways Enterprise SPICE processes might be implemented for a particular application.

Note: This construct is an innovation introduced in Enterprise SPICE

Enterprise SPICE Architecture

<i>Governance/Management Category (9 processes)</i>		<i>Special Aps (1)</i>
Enterprise Governance Investment Management Human Resource Management Enterprise Architecture	Business Relationship Management Supplier Agreement Management Tendering Project Management Risk Management	S A F E T Y
<i>Life Cycle Category (8 processes)</i>		
<p style="text-align: center;">.....Needs.....</p> Requirements		and S E C U R I T Y
Design		
Design Implementation		
<p style="text-align: center;">.....Evaluation.....</p>		
<i>Support Category (11 processes)</i>		U
Alternatives Analysis Measurement and Analysis Quality Assurance and Management Change and Configuration Management Information Management	Knowledge Management Training Research and Innovation Work Environment Process Definition Process Improvement	R I T Y

Process Descriptions

Each Enterprise SPICE process is described by:

- Purpose – functional objectives of the process
- Outcomes – expected positive results
- Base Practices – activities to be performed to achieve outcomes
- Relationship Notes* - between and among processes
- Work Products – input and output
- Mapping* - to the materials used to derive the process description

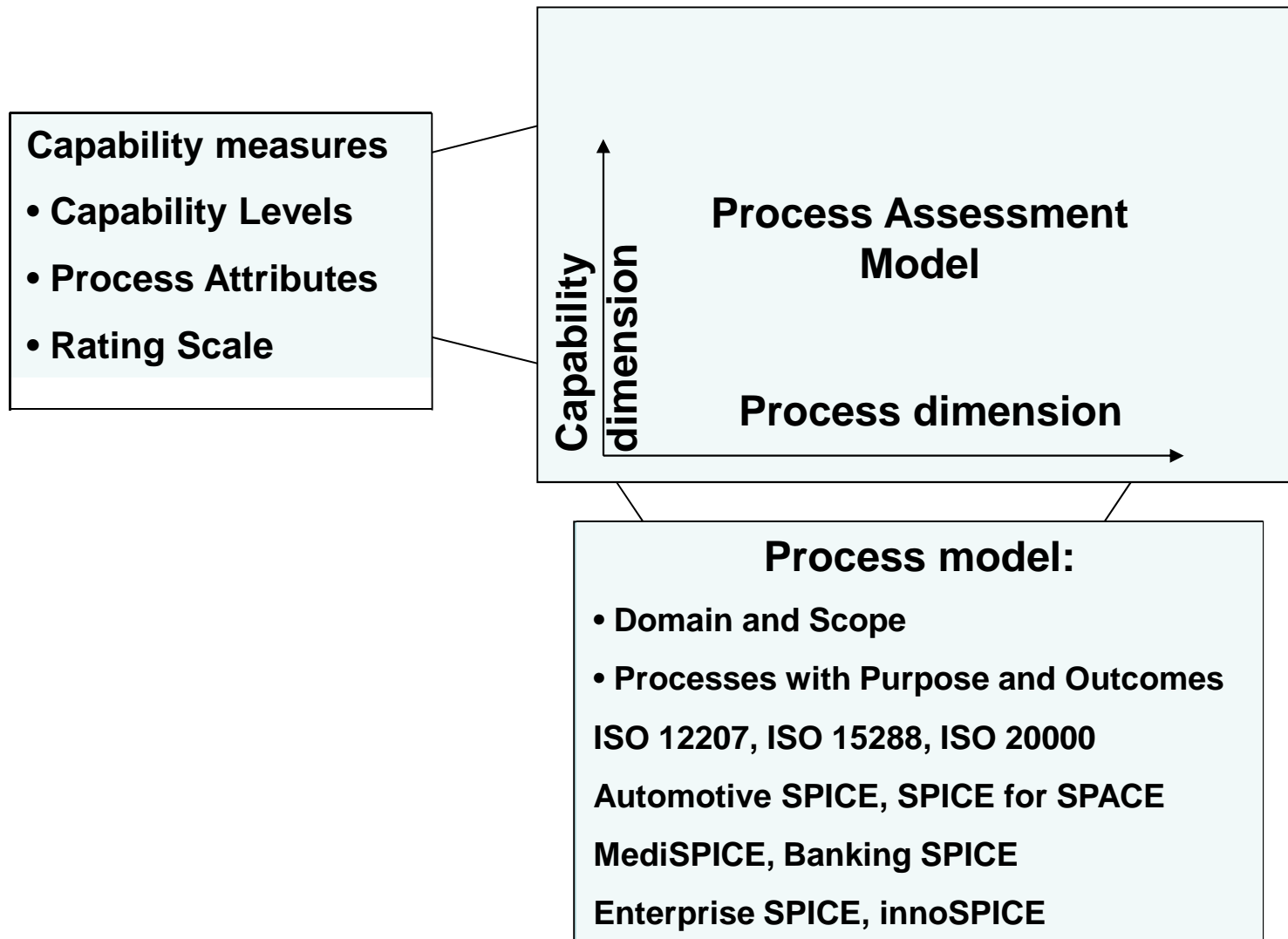
** Note that Relationship Notes and source mapping are additional new constructs in SPICE models*

Enterprise SPICE Future

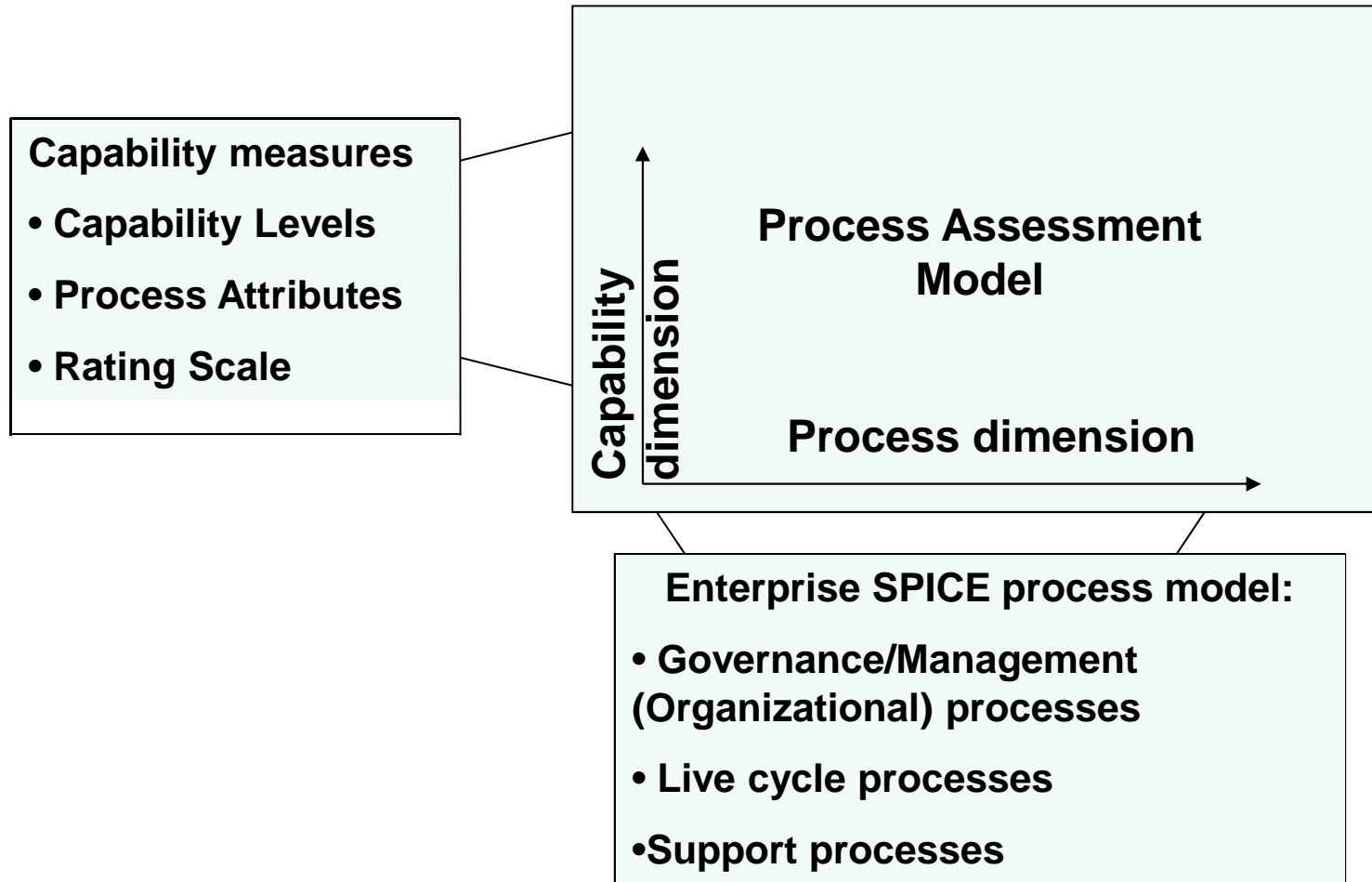
SPICE Transition

- ISO/IEC 15504 is currently transitioning to ISO/IEC 33001-99 series of standards.
- Conformant products (e.g. PRMs and PAMs) developed by the community can be submitted for endorsement as Publicly Available Specifications (PAS).
- Enterprise SPICE model is conformant with ISO/IEC 15504-2 requirements for PAMs
- It is anticipated that the Enterprise SPICE model will become part of the new ISO/IEC 330xx series

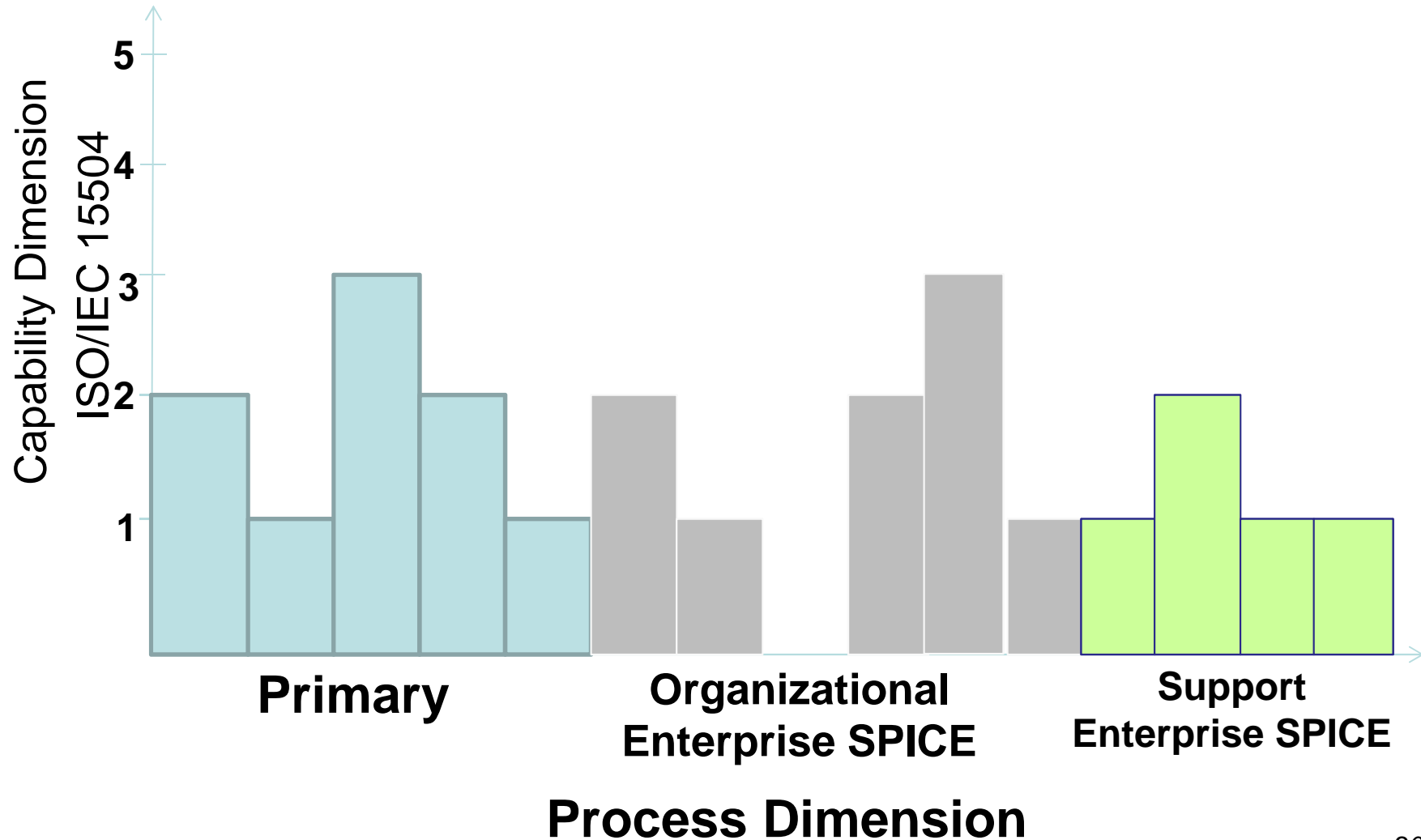
Context of Enterprise SPICE: ISO/IEC 15504 + External Process Model



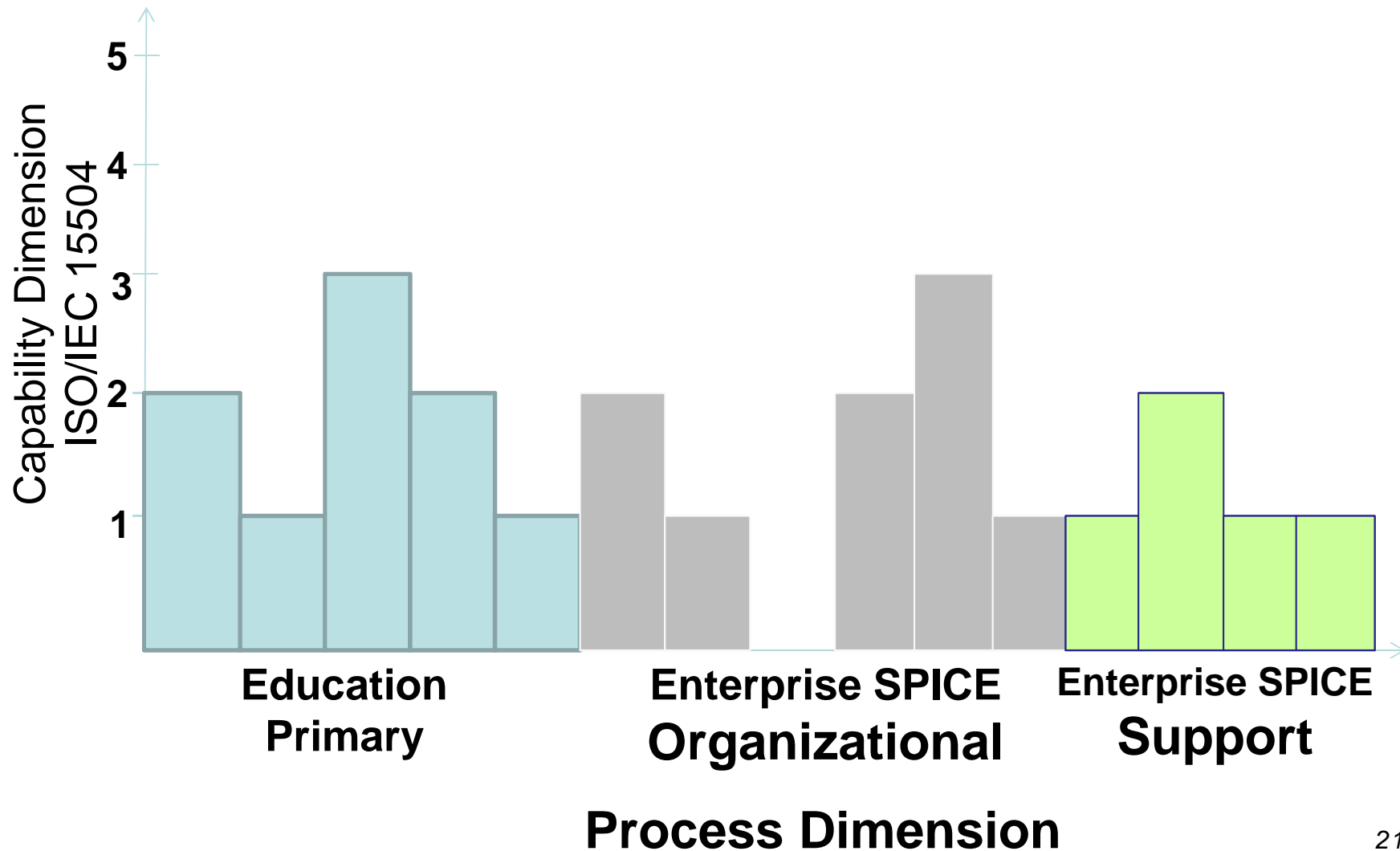
Enterprise Capability Maturity Model: Enterprise SPICE as an umbrella



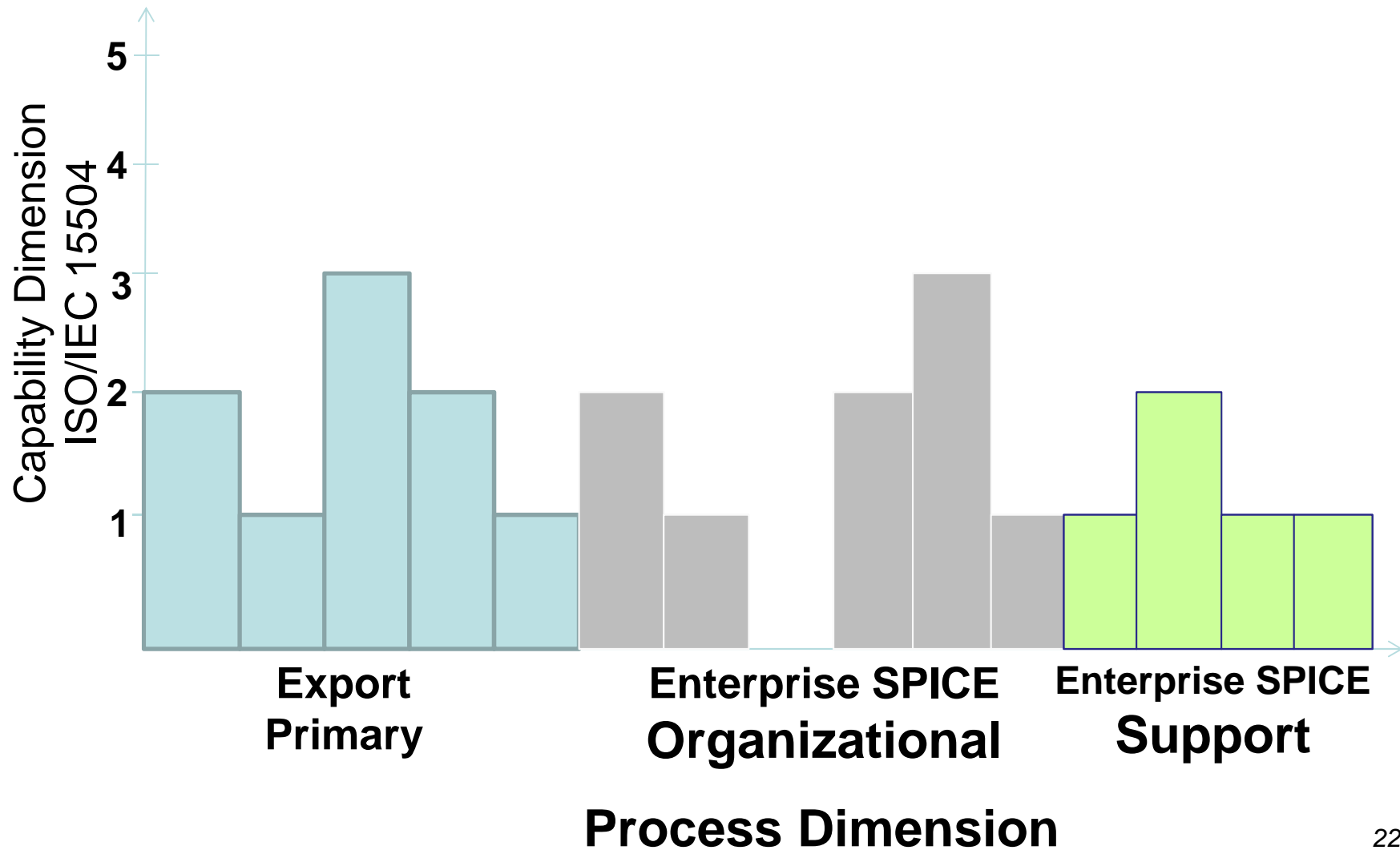
Generic Capability Maturity Model



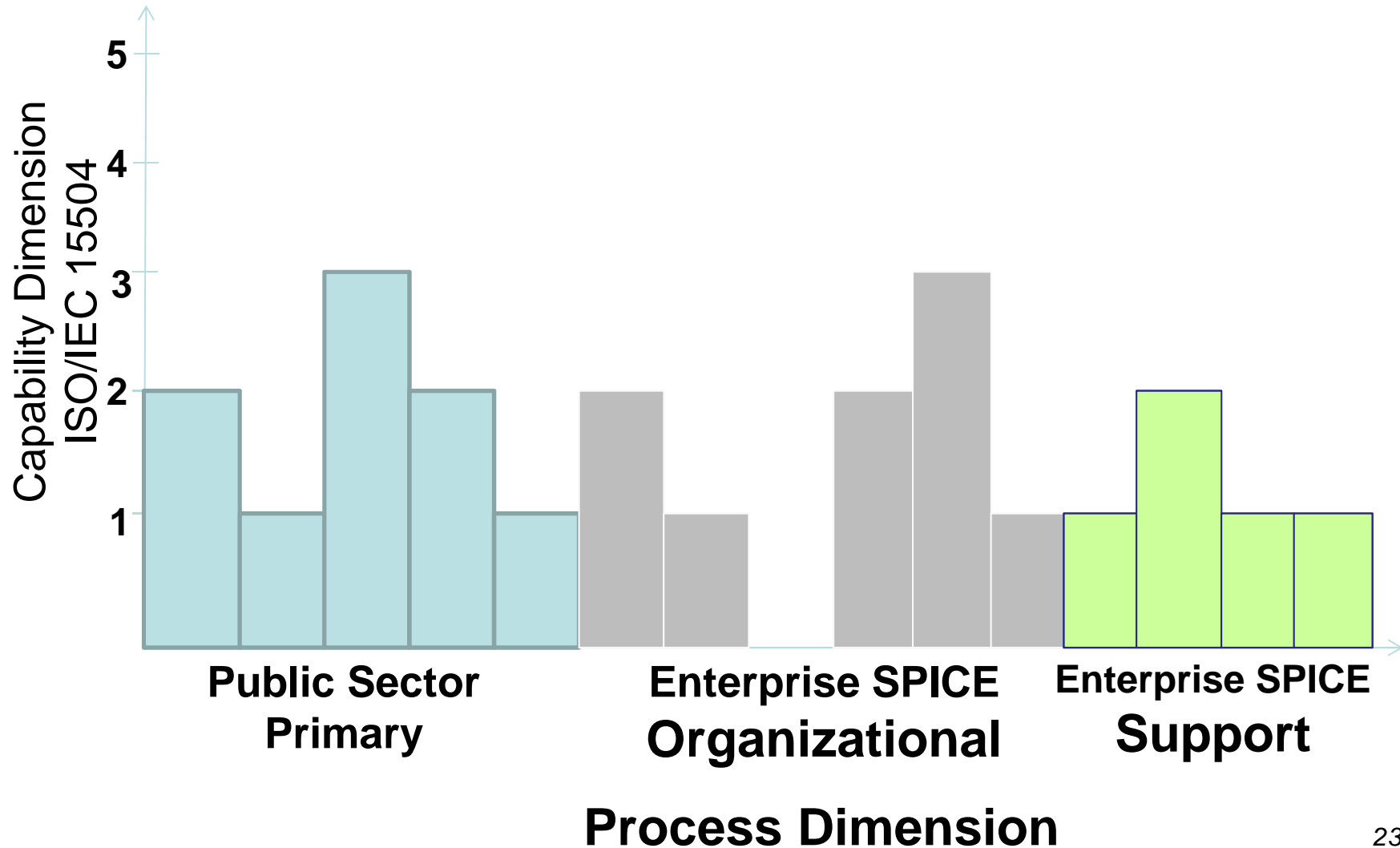
Education Capability Maturity Model EduSpice



Export Capability Maturity Model X-Spice



Public Sector Institution Capability Maturity Model



Next Steps

Next steps – your part

We hope you use our initial release for enterprise-wide improvement and let us know your experiences

Next steps – our part

- Proceed with Phase 2 efforts

Communications, Training, Guidance, Partnerships, Assessment Oversight, Interest Groups, Tool Support

- Concurrently work on enhancements/ improvements

We are devoted to continuous improvement

With your help, we intend to provide the best enterprise improvement guidance available

Questions, comments?

For latest information and
free download of Enterprise
SPICE visit

www.enterprisespice.com



Linda.Ibrahim@faa.gov
Antanas.Mitasiunas@mitsoft.lt