



Spice Days 2007

SPICE Assessment for IT Service Management according to ISO/IEC 20000-1

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SPICE Assessments for ISO 20000 / ITSM - 1

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Frankfurt, Spice Days 2007

Agenda



- Short introduction: Andreas Nehfort & Nehfort IT-Consulting
- Short Introduction to ISO 15504
- Short introduction into ITIL & ISO 20000
- Developing the ISO 20000 – PAM:
 - Process Reference Model
 - Process Assessment Model
- Assessment Tool SPICE 1-2-1 for ISO 20000
- First experiences
- Some news from ISO ...

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Andreas Nehfort



IT-Consultant & Trainer - since 1986 Nehfort IT-Consulting KEG:

- Software Processes → Assessment Based Process Improvement:
 - Software Engineering: CMMI, SPiCE & Automotive SPICE
 - IT Service Management → ITIL and ISO 20000
- IT-Project Management, Quality Management, SW - Requirements

Formal Qualification / Certificates:

- iNTACS Certified Competent Assessor für SPICE / ISO 15504
- CMMI V1.2 Upgrade
- /tsmf certified ISO 20000 Consultant

Background:

- TU-Wien – Studying Technical Mathematics: 1975 - 1979
- Software Developer and Project Management since 1978

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Nehfort IT-Consulting



IT-Consulting Company with focus on:

- Software Processes & Software Process Improvement
- Based on well established reference models:
 - SPiCE - ISO15504 / Automotive SPiCE / CMMI
 - ITIL / ISO 20000 or ISO 27000ff
 - Agile Processes / RUP - Rational Unified Process
- Network of independent Consultants, Trainers & Assessors:
 - Software Engineering & Project Management
 - IT Service Management & IT Security Management
- Partner network for allied topics

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ISO 15504 / SPiCE



ISO/IEC 15504: Information Technology – Process Assessment

- ISO/IEC 15504-1: Part 1: Concepts and Vocabulary
- **ISO/IEC 15504-2: Part 2: Performing an Assessment**
- ISO/IEC 15504-3: Part 3: Guidance on Performing an Assessment
- ISO/IEC 15504-4: Part 4: Guidance on use for process improvement and process capability determination
- **ISO/IEC 15504-5: Part 5: An exemplar process assessment model**
- **ISO/IEC TR 15504: Part 6: Exemplar Systems Life Cycle Processes Assessment Model (based on ISO 15288)**
- **ISO/IEC 15504: Part 7: Assessment of Organisational Maturity**

red: **normativ** blue: **informative** green: **under development**

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ISO 15504 - Scope



The scope of ISO/IEC 15504: **process assessments**

- **for improvement and capability determination**
- It is not limited to software & systems engineering!

Other best practice models for IT

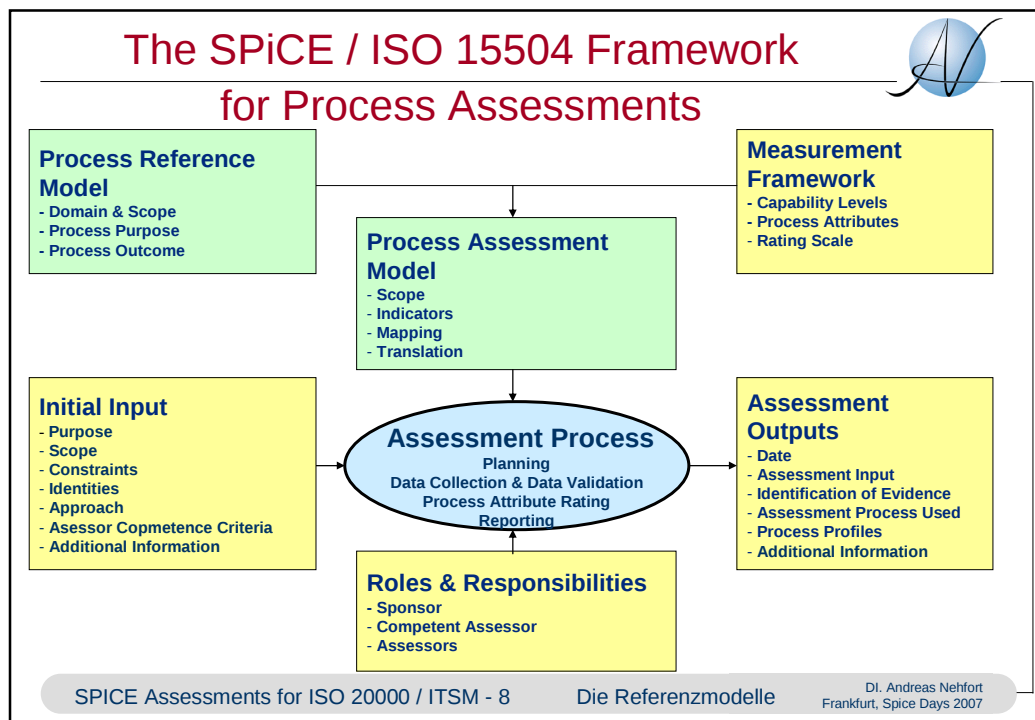
- like ITIL® and ISO 20000 for IT Service Management
- or ISO 27000ff for Information Security Management

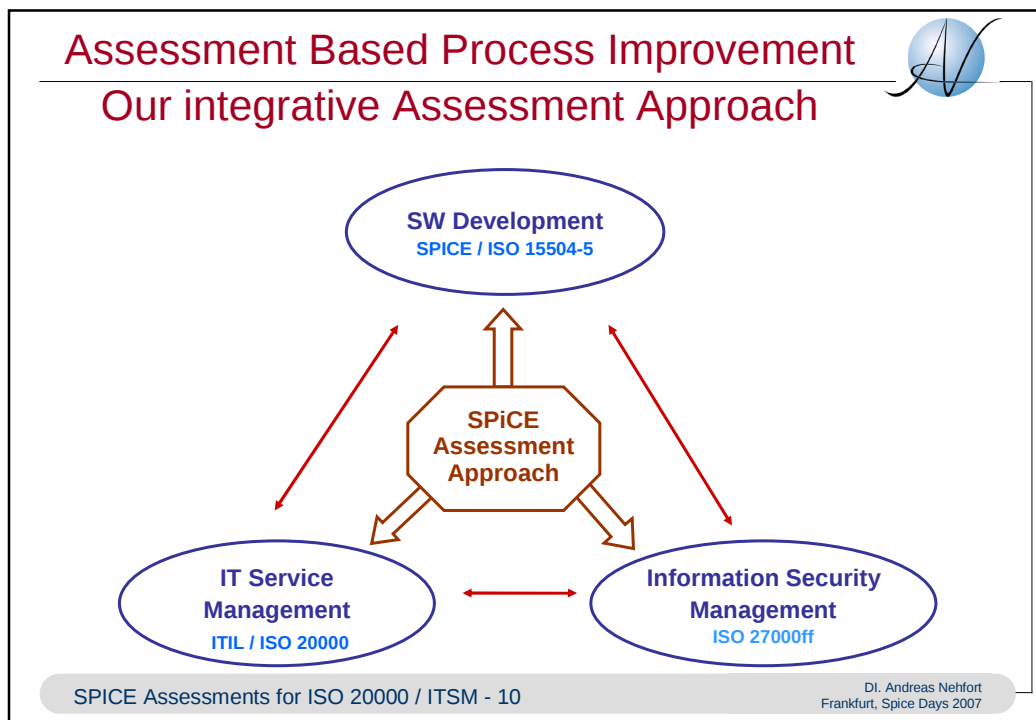
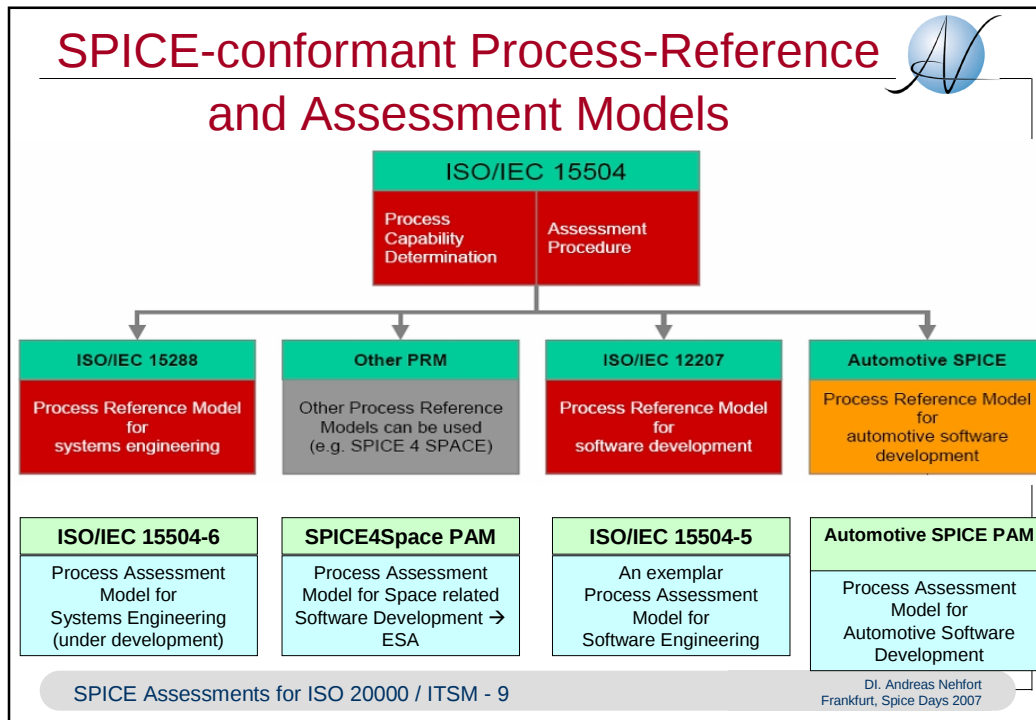
do not provide such a concise approach for process improvement.

So ISO 15504 / SPICE can be used as a **universal model** for process assessment and process improvement.

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Assessment Based Process Improvement

Assessment Based Process Improvement combines:

- 1.) The SPICE assessment approach as defined in ISO 15504-2
- 2.) International and industry standards for the different process domains:
 - **For Software Engineering:**
ISO/IEC 12207 as PRM and ISO/IEC 15504-5 as PAM
 - **For Systems Engineering:**
ISO/IEC 15288 as PRM and the new ISO/IEC 15504-6 as PAM
 - **For IT Service Management:**
ITIL (best practice) and ISO/IEC 20000-1 as standard for certification.
 - **For Information Security Management:**
ISO/IEC 27001:2005 as standard for certification and
ISO 17799 as standard for information security controls.
 - **For IT Governance:**
Cobit as accounting standard for IT governance and SOX

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A-B-P-I: Our Initiatives

ISO 20000 – PAM (developed in 2006):

- SPICE conformant **Process Assessment Model** for
IT Service Management Processes according to ISO/IEC 20000-1
- Combines state of the art know-how from two different angles:
 - The Reference Model for IT-Service Management: ISO 20000-1
 - The Process Assessment model based on ISO 15504 / SPICE
- Assessment Tool: **SPICE 1-2-1 for ISO 20000**

→ www.spice4ISO20000.com

ISO 27000 – PAM (planned for 2007):

- SPICE conformant Process Assessment Model for
Information Security Management according to ISO 27001 & ISO 17799
- Assessment Tool: **SPICE 1-2-1 for ISO 27000**

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ITIL



ITIL is a best practice approach for **IT Service Management**:

- ITIL-roots: Great Britain – governmental IT - 1989
- ITIL: „IT Infrastructure Library“ → a set of books
- ITIL is no standard and no method

ITIL was the basis for the british standard BS 15000

BS 15000 was the basis for ISO 20000

Today ITIL® is:

- A registered trademark of OGC
- An industry de facto Standard for IT Service Management
→ Certification: ITIL Foundation & ITIL Service Manager

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Die Referenzmodelle

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ISO 20000 – The ISO Standard for IT Service Management



ISO 20000 has two roots:

- the ITIL best practice framework
- the ISO 9000 Concept of „Integrated Management Systems“:

The Standard:

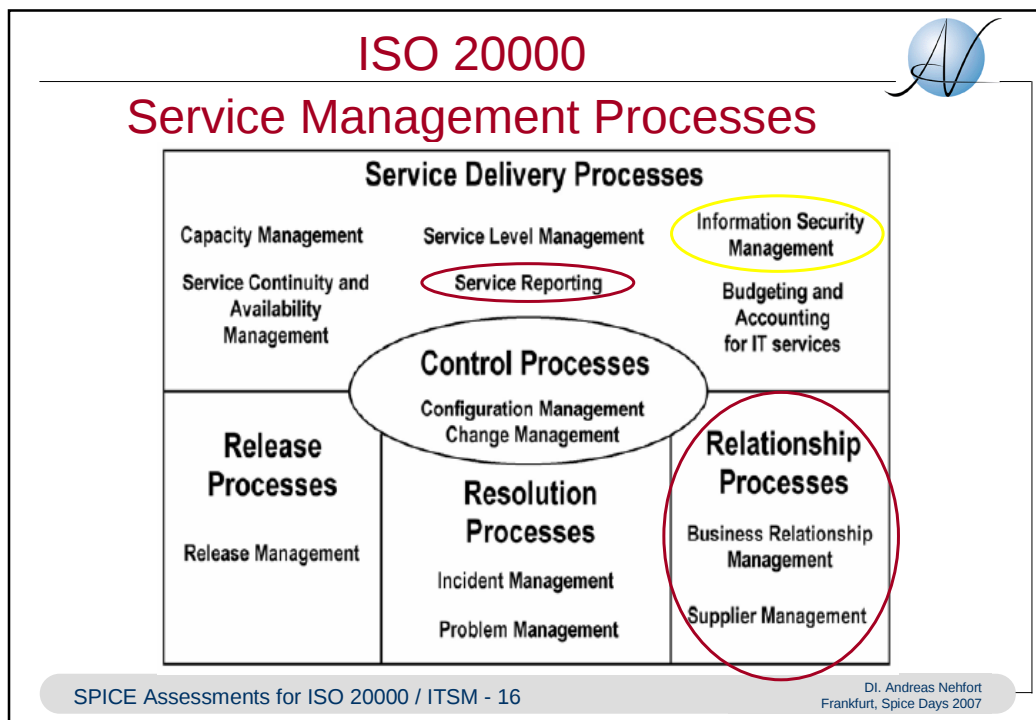
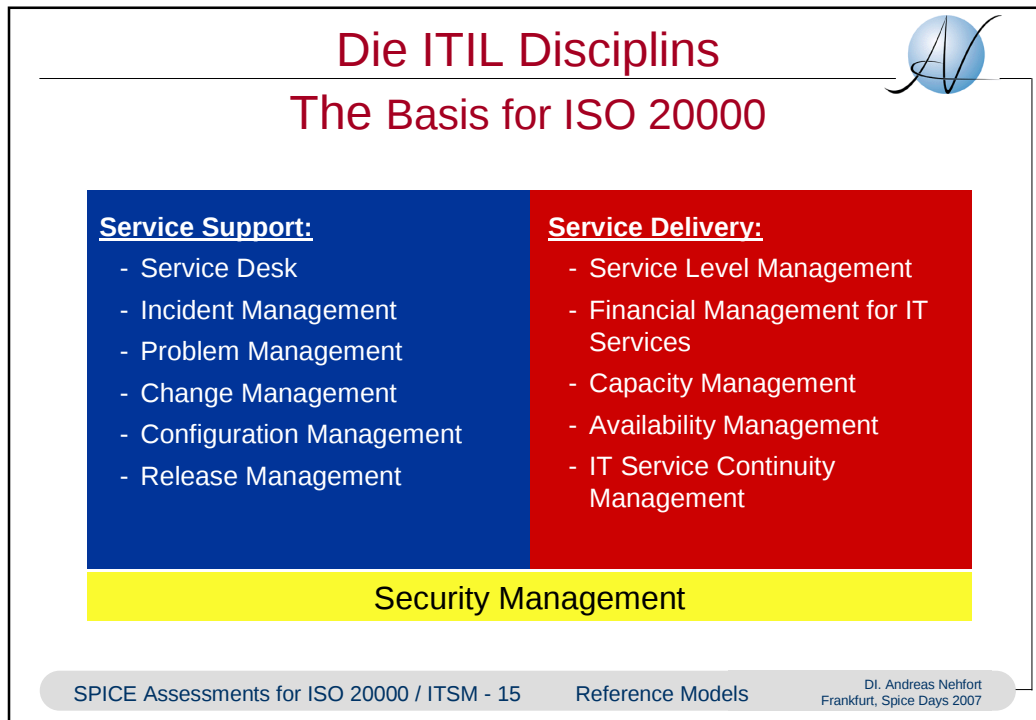
- ISO 20000-1: Information Technology
Service Management Part 1: Specification
- ISO 20000-2: Information Technology
Service Management Part 2: Code of Practice

The purpose of ISO 20000 is Certification!

- ISO 20000-1 certified IT Service Management System

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ISO 20000 → Managed Services



ISO/IEC 20000 defines the **requirements for a service provider** to deliver **managed services** of an acceptable quality for its customers.

It may be used:

- a) by businesses that are going out to tender for their services;
- b) by businesses that require a consistent approach by all service providers in a supply chain;
- c) by service providers to benchmark their IT service management;
- d) as the basis for an independent assessment;
- e) by an organization which needs to demonstrate the ability to provide services that meet customer requirements; and
- f) by an organization which aims to improve service through the effective application of processes to monitor and improve service quality.

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ISO 20000 - requirements

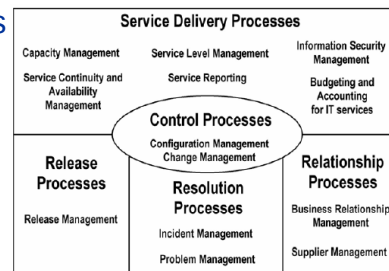


Requirements to the IT Service Management System:

- Chapter 3. Requirements for a Management System
- Chapter 4. Planning & Implementing Service Management
- Chapter 5. Planning & Implementing New or Changed Services

Requirements to the IT Service Management Processes:

- Chapter 6. Service Delivery Processes
- Chapter 7. Relationship Processes
- Chapter 8. Resolution Processes
- Chapter 9. Control Processes
- Chapter 10. Release Process



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Developing the Process Reference Model

ISO/IEC 20000-1 is structured in chapters, which can be interpreted as

- **Process Groups**: first level headlines - Chapter 3 to 10 and
- **Processes**: second level headlines - Chapter 3.1 to 10.1

An ISO 15504 conformant Process Reference Model describes its processes in Terms of **“Purpose”** and **“Outcomes”**.

ISO/IEC 20000-1 describes these processes in terms of **“Objectives”** and **required activities and results**.

- The objective-statement can be used as purpose-statement;
- Required activities & results can be translated into outcomes.

Developing the Process Assessment Model (performance indicators)

An ISO 15504 conformant Process Assessment Model describes performance indicators for capability level 1 in terms of **base practices** and **work products**.

- The activities required by ISO/IEC 20000-1 can be interpreted as base practices;
- The work products can be derived from the required results.
Work product indicators can be found in ISO 20000-2!

At the moment the ISO 20000 – PAM only uses base practices as performance indicators → planned for the next version ...

The Capability Dimension



For the ISO 15504 compliant Process Assessment Model the Capability Dimension is provided by the ISO 15504:

- The **measurement framework** for process capability is defined in ISO 15504-2 - Chapter 5.
- The **process capability indicators** are defined in ISO 15504-5 - Chapter 6.

For other purposes the capability dimension and the process capability indicators can be replaced - e.g. by:

- CMMI: Capability Levels CL 1 to CL5 and their corresponding capability level indicators.

First Assessments



October 2006:

- Incident management & problem management
- Up to Capability Level 3 and 4

(in line with the GPard Process Award → www.prozesse.at)

First experiences & feedback:

- The approach has proved as practicable!
- Structuring the ISO 20000-1 requirements into "base practices" makes the ISO 20000-1 **more readable** and **easier to understand** for the target audience.
- Some of the ISO 20000-1 requirements are not precise!
- Here the ISO 20000-2 can help - warning: just recommended

Assessment Tools



The SPICE 1-2-1 Tool-Family

- **SPICE 1-2-1 for international Standard**
PAM → ISO 15504-5
→ www.spice121.com
- **SPICE 1-2-1 for Automotive**
PAM → Automotive SPICE
→ www.spice12drive.com
- **CMM-Quest**
PAM → CMMI V1.2 → www.cmm-quest.com
- **SPICE 1-2-1 for ISO 20000**
PAM → IT Service Management → ISO 20000-1
→ www.spice4iso20000.com

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SPICE 1-2-1 for ISO 20000



Assessment Tool for IT Service Management → ISO 20000-1

Available in two versions:

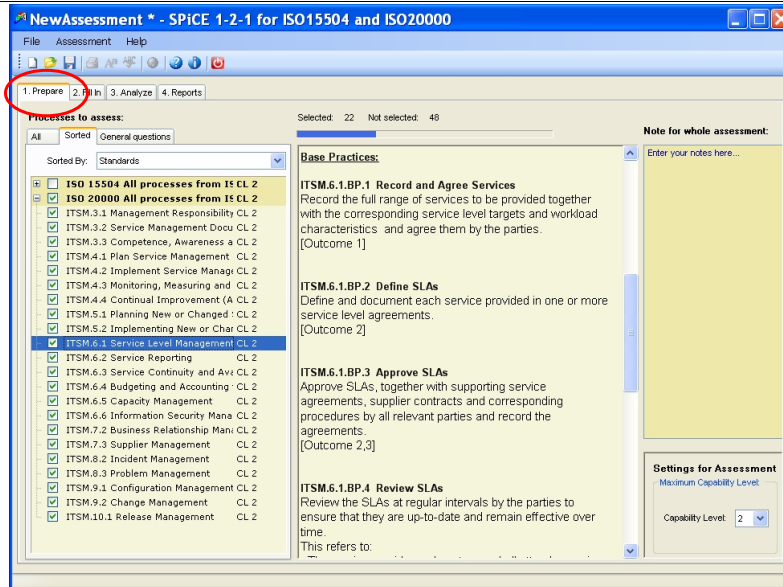
- **SPICE 1-2-1 for ISO 20000**
 - Assessment tool referring to the ISO 20000-1 standard for IT Service Management Processes
- **SPICE 1-2-1 for ISO 15504 and ISO 20000**
 - Assessment tool for both standards:
ISO 15504-5 & ISO 20000-1
 - Supports an integrated SPICE based approach for
SW Development & IT Service Management

→ www.spice4iso20000.com

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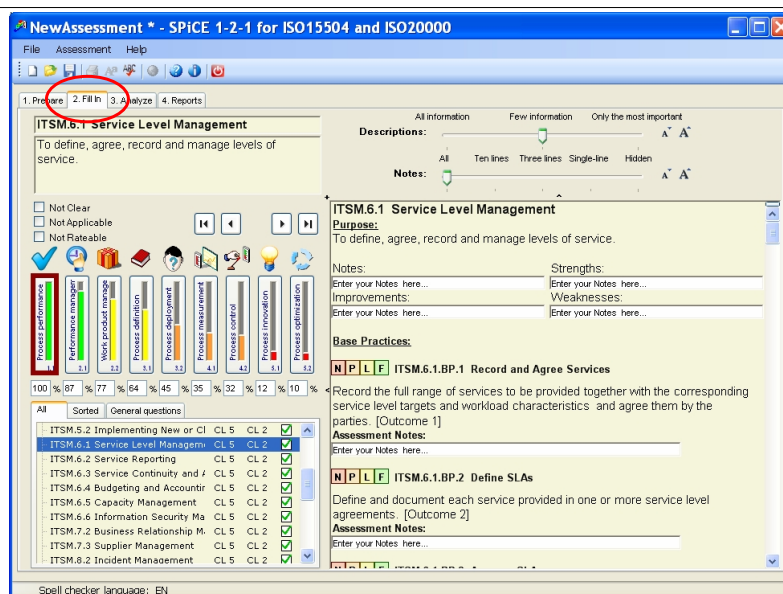
SPICE 1-2-1: Prepare



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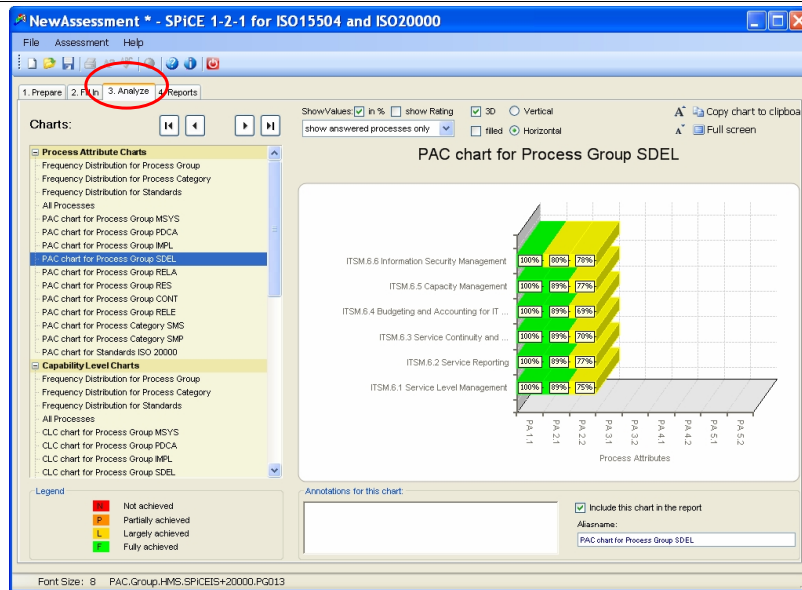
SPICE 1-2-1: Fill-In



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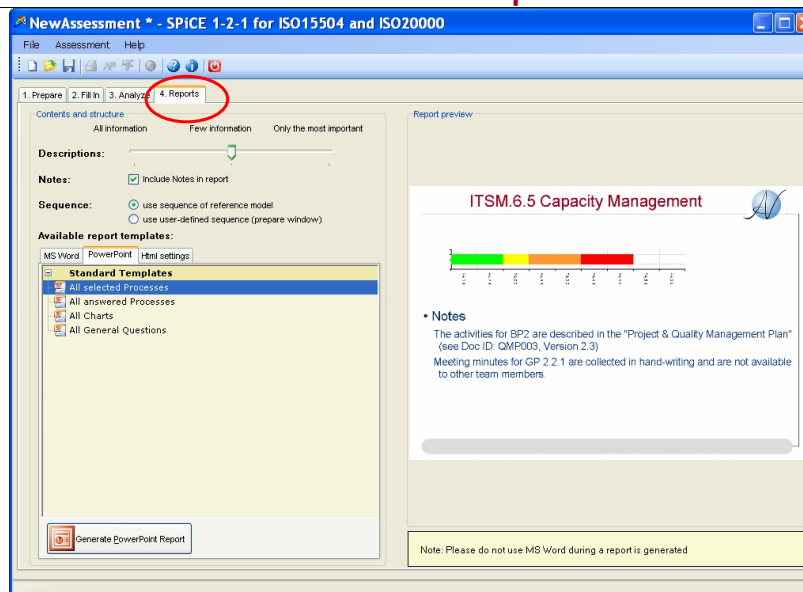
SPICE 1-2-1: Analyze



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SPICE 1-2-1: Reports



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Reference customers



SPICE 121 for ISO 20000 has been purchased by the following IT-organizations within the last eight months:

- **BAWAG-PSK** (Vienna):
the number 4./5. banking group in Austria.
- **IT-Austria** (Vienna):
The computing centre for BA-CA Group & Erste Bank Group
- **HVB Information Services** (Munich)
- **BRZ – Bundesrechenzentrum GmbH**. (Vienna):
The computing centre for the Austrian governmental admin.
- **Baxter AG** (Vienna): Pharmaceutical industry

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Synergies between ISO20000 and ISO 15504



Parts of the ISO 15504-5 can be reasonably applied to support implementation of IT Service Management:

ISO 20000 Processes	Corresponding Processes in ISO 15504-5
• Chapter 3: Requirements for a Service Management System and • Chapter 4: Planning and Implementing Service Mangement	• MAN – Management Process Group • RIN – Resource and Infrastructure Process Group • PIM – Process Improvement process Group
• Chapter 7.2 Business Relationship Management	• SPL – Supply Process Group
• Chapter 7.3 Supplier Management	• ACQ – Acquisition Process Group

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Synergies between ISO20000 and ISO 15504



In other cases both models provide similar processes seen from two different points of view, e.g.:

ISO 20000 Processes	Corresponding Processes in ISO 15504-5
Chapter 8: Resolution Processes: • 8.2 Incident Management • 8.3 Problem Management	• SUP 9: Problem Resolution Management • SUP 10: Change Request Management

Emerging Interest in the process capability approach



We notice a substantial interest to apply process capability approaches (CMMI and SPICE) to IT Service Management

- especially by companies which deal with CMMI or SPICE for software engineering processes anyway.
- For SW-Product companies:
 - ISO 15504-5 for SW-Product Development
 - ISO 20000 for the product related service organisation

We also notice a substantial interest to apply the SPICE capability approach to **organization wide process management** initiatives, which cover not only IT processes!

NEWS: ISO 20000 goes SPICE



Resolution at the ISO plenary meeting regarding
IT Service management – Moscow, May 2007:

- To develop an ISO - Process Reference Model (PRM)
- To develop an ISO - Process Assessment Model (PAM)

The intention:

- To develop **ISO 20000-4** as PRM for ITSM
- To develop **ISO 15504-8** as corresponding PAM

ISO will need some years to publish these standards ...

But you can benefit from our work right now ...

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A-B-P-I: Our next ideas



We have made plans for the following Assessment Tools:

- **SPICE 1-2-1 for Systems**
- **SPICE 1-2-1 for ISO 27000**
- **SPICE 1-2-1 for Cobit**
- **Multi-Standard-Tools: dependent on business cases ...**

Thank you for your attention!

Questions & Discussion

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