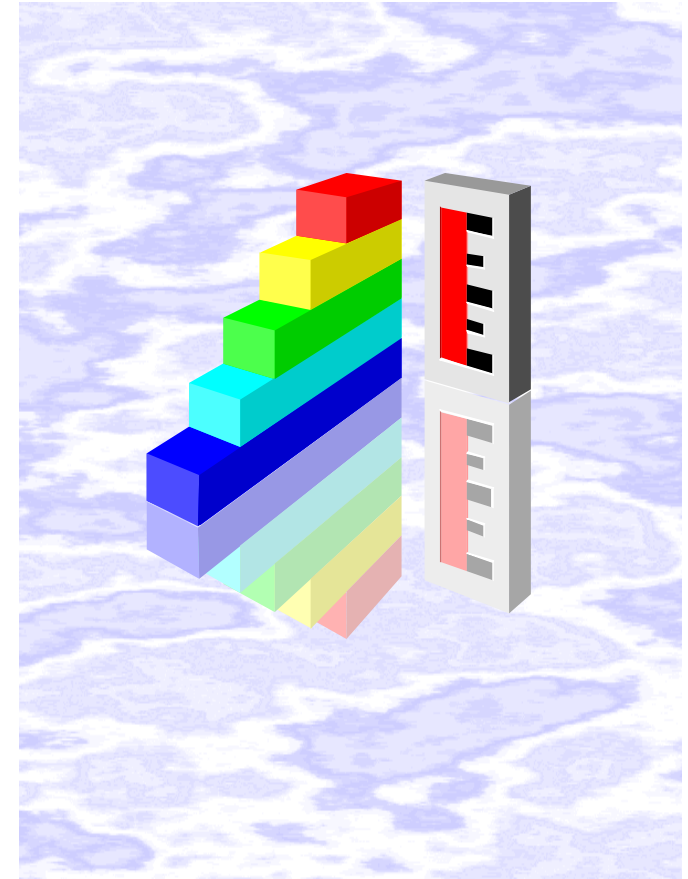




Enabling Software Process Improvement

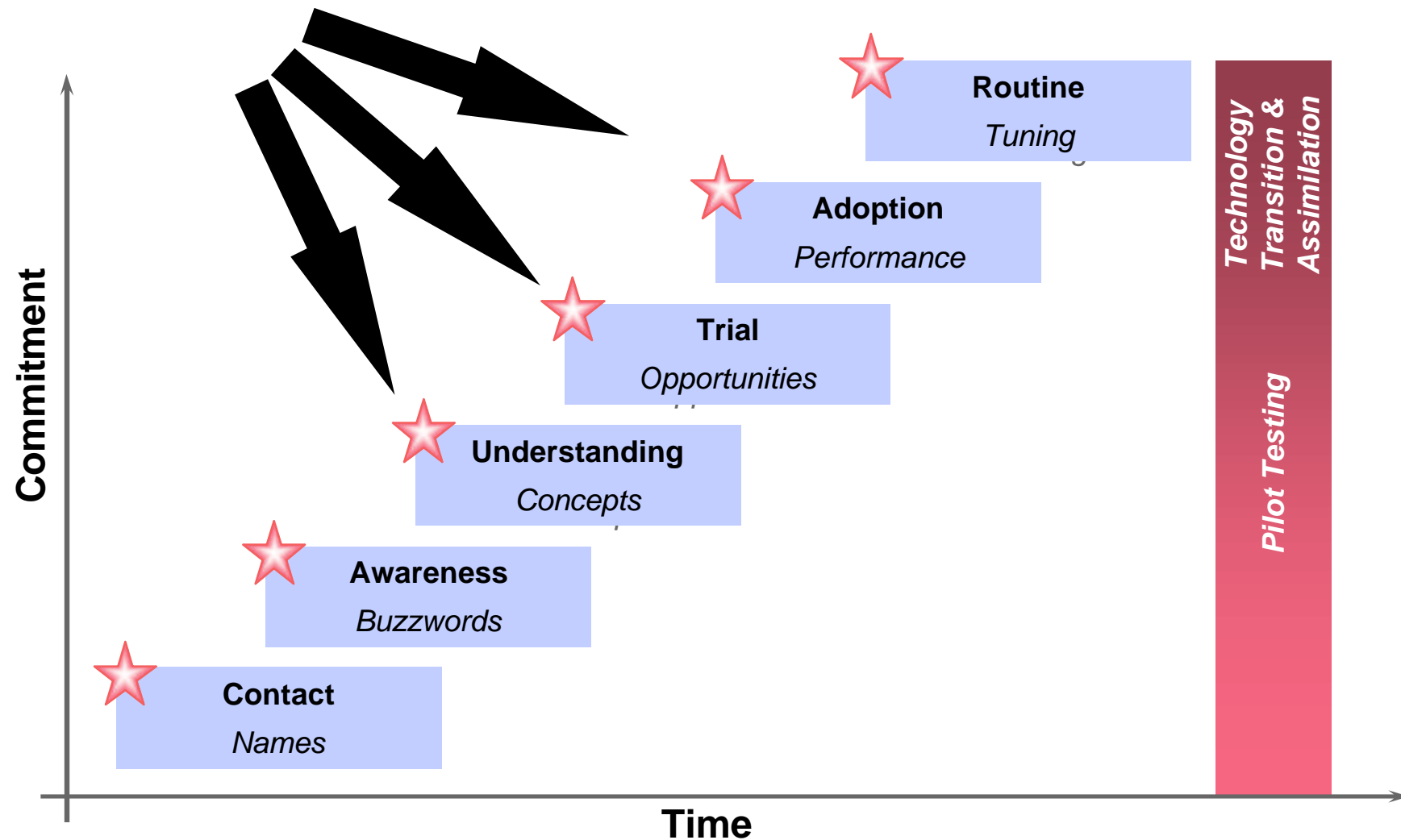
Concepts & Experiences

Chr. Steinmann & H. Stienen



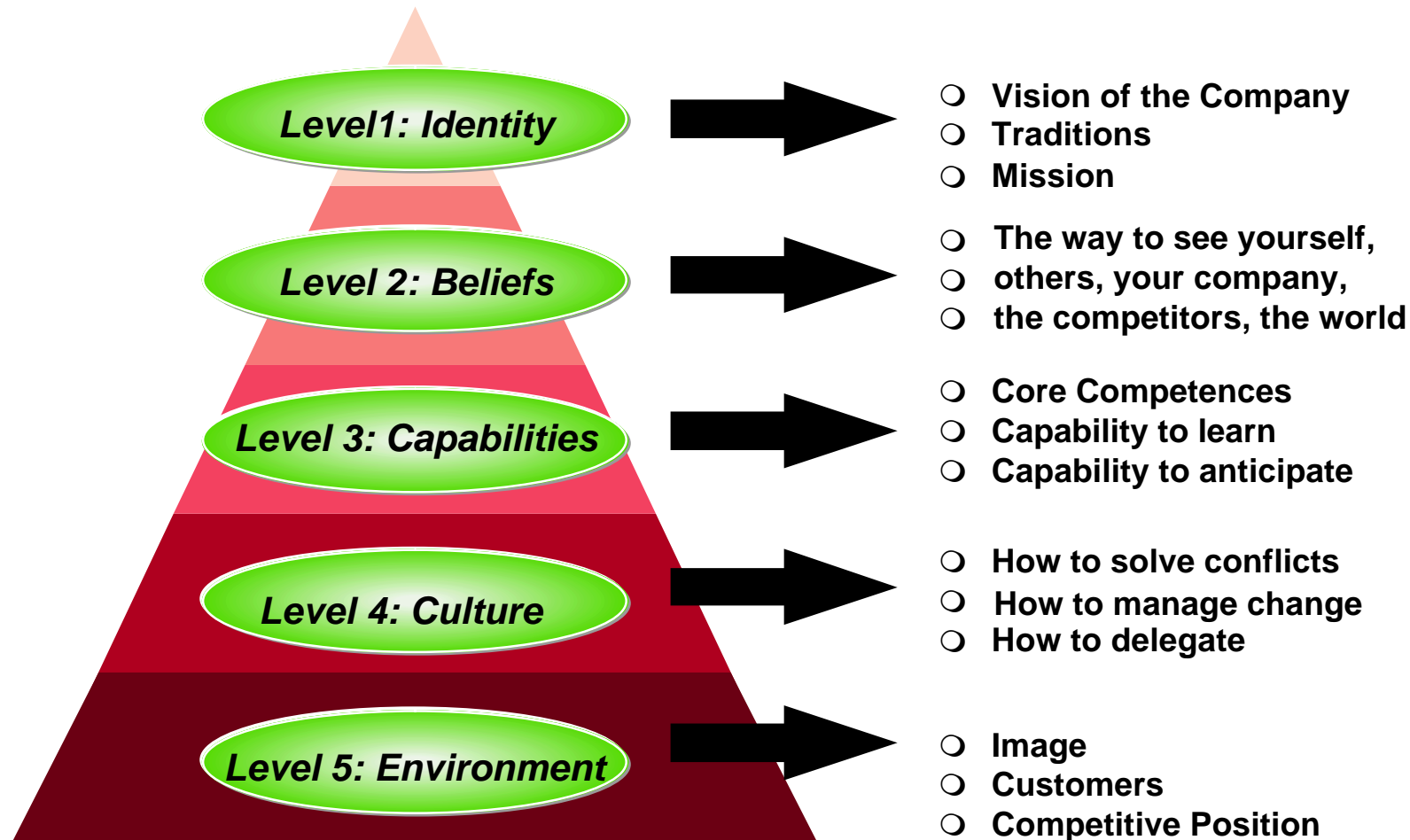


Committment to New Approaches





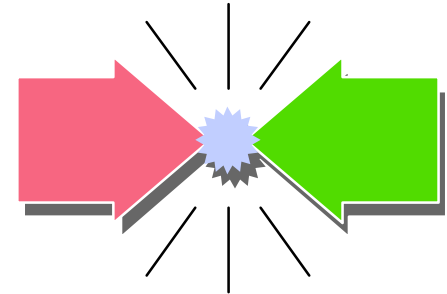
Stages in the Change Process





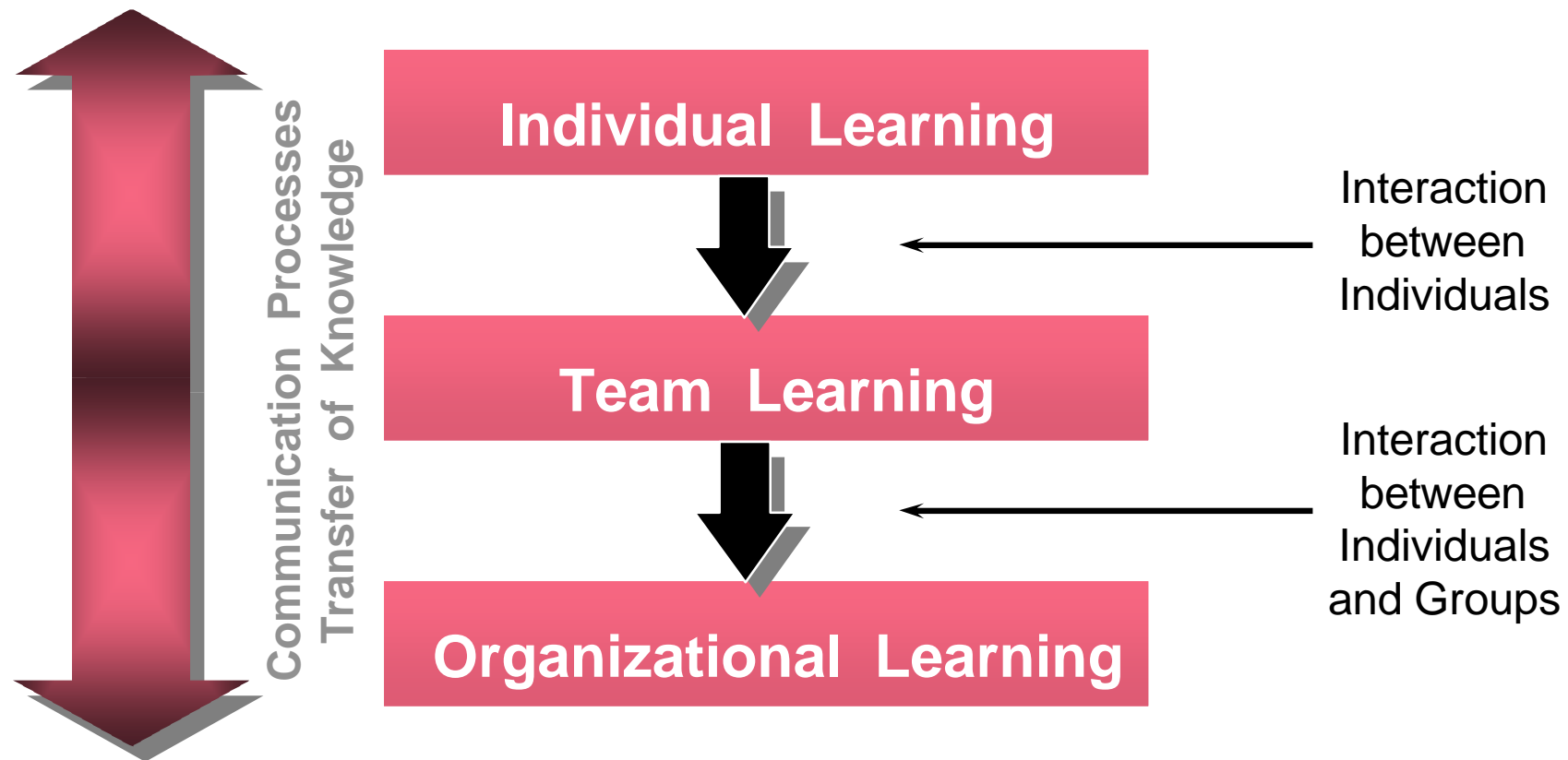
Managing Resistance

- ❖ Address problems explicitly
- ❖ Predict and verify sources of resistance
- ❖ Involve the people that will be affected
- ❖ Develop mitigation strategies
- ❖ Create an environment in which it is safe to express objections
- ❖ Remember that people may resist for good reasons





The Learning Dimension





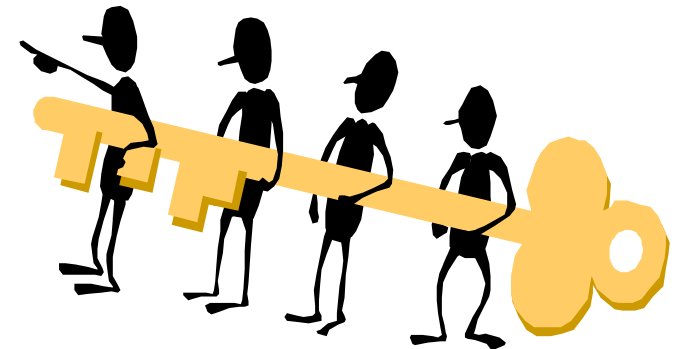
Provides ...

- ❖ Clear descriptions of all relevant software development activities
- ❖ A baseline for further improvements
- ❖ Profiles of the major organisational strengths and weaknesses



Is suited for ...

- ❖ EDP Executives
- ❖ Software Project Leaders
- ❖ Quality Managers
- ❖ Software Development Teams
- ❖ IT Controlling

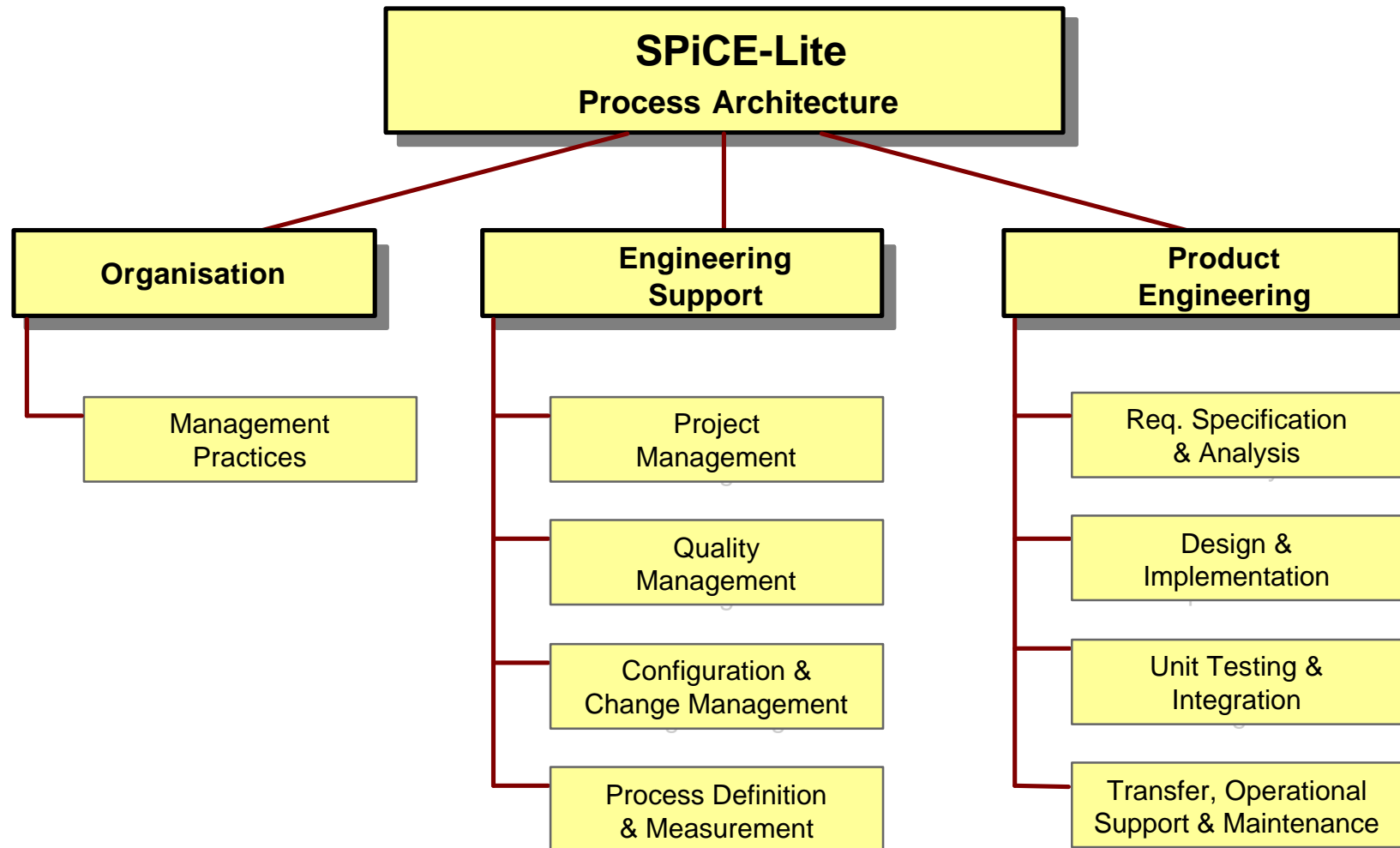


Is based on ...

- ❖ Experiences with the BOOTSTRAP-Method
- ❖ ISO 9001 and ISO 9000-3 Standards
- ❖ The ESA PSS-05 Software Process Model

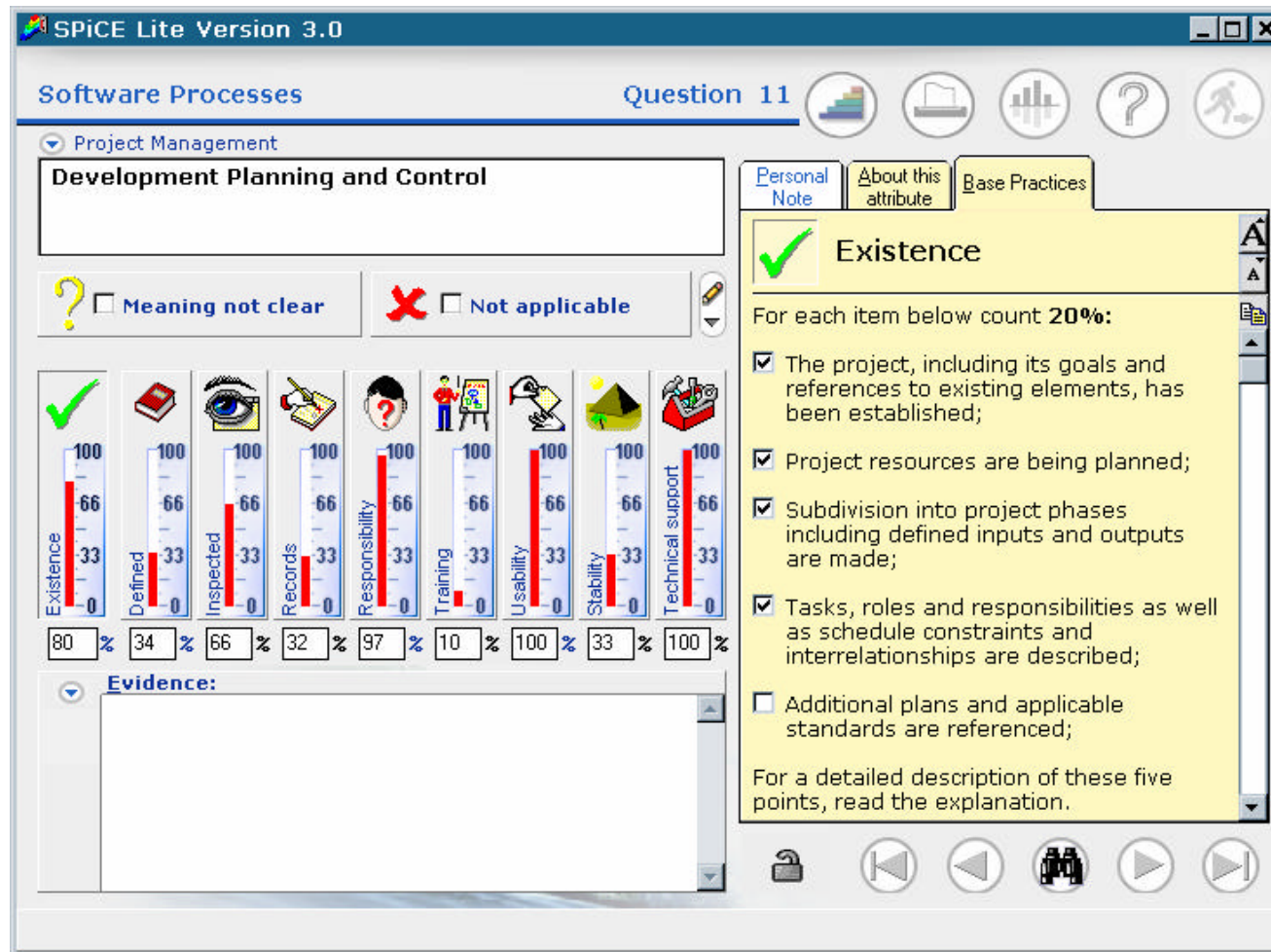


Software Process Framework





Process Attributes



- ❖ Existence
- ❖ Defined
- ❖ Inspection
- ❖ Records
- ❖ Responsibility
- ❖ Training
- ❖ Usability
- ❖ Stability
- ❖ Supporting Tools



Process Definitions



Definition

The management shall ensure that there is a defined process of transferring information from one person or group to another person or group with the understanding that the message being transmitted was understood by both groups or both individuals.
[IEEE Software Engineering Project Management, Glossary 1988]

If you want to know how in general the process is defined ...

Click on:



☐ Meaning not clear

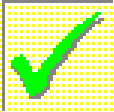
or:



☐ Not applicable

Read the definition.





Existence

Organised Communication

33%:

- periodical informal chats over a cup of coffee, initiated by the management
- ad hoc reporting

66% :

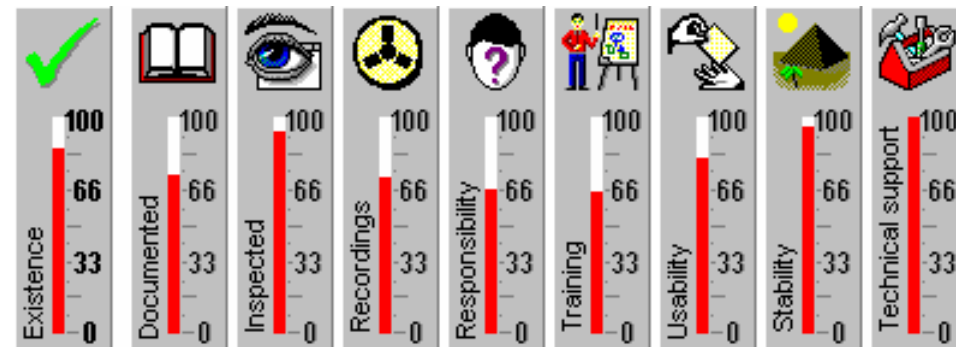
- systematic reviews
- defined reporting channels

100%:

- Standardised reports and reporting channels which are continuously being optimised
- problem oriented conferences moderated by trained and experienced persons (e.g. quality-circle)

If you want to know what kind of activities should be performed ...

Click on : 



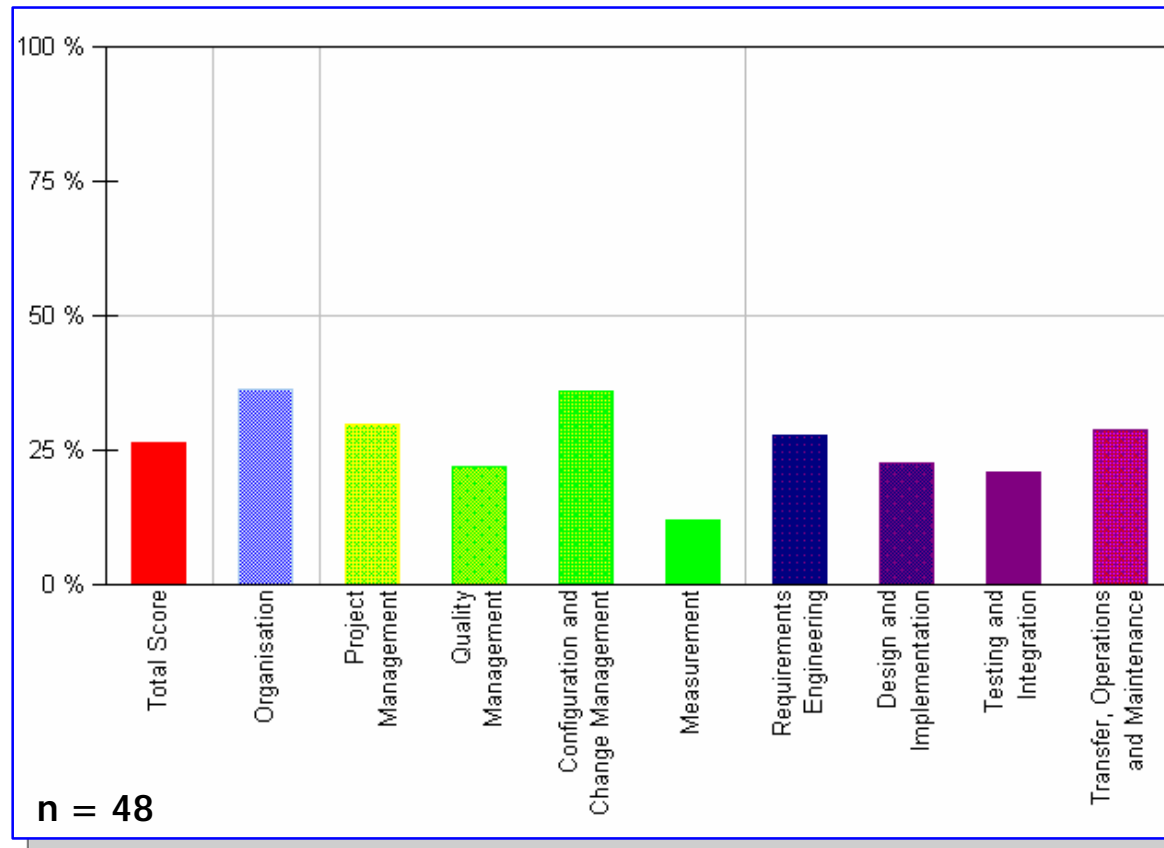
Read the Rating Guideline.



Guidelines are always context-sensitive.



Scores per Process Area



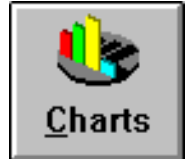
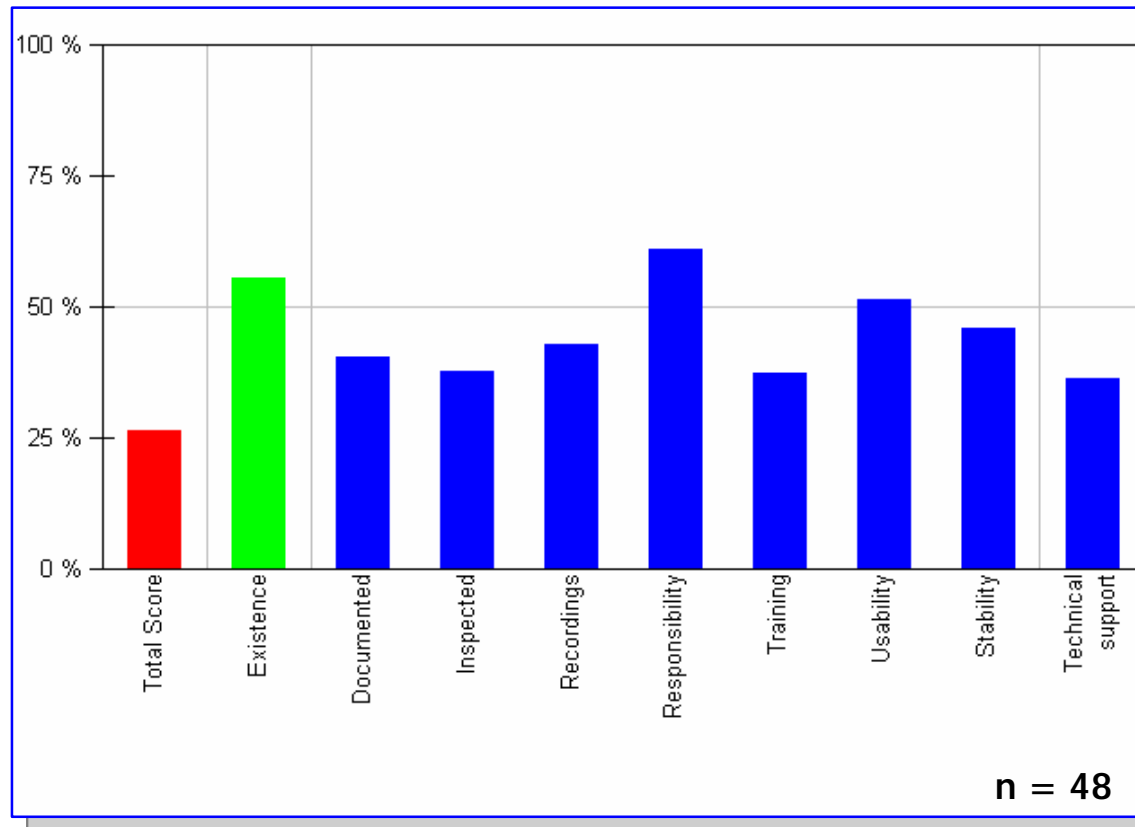
The relative scores gives you an indication of the strengths and weaknesses of each of the process areas.

The Total Score provides a baseline for determining whether specific improvement actions did work.

This chart provides an overview of the overall score as well as the score per process area.



Scores per Process Attribute



The relative scores give you an indication of the strengths and weaknesses of each of the process attributes.

This gives you an impression whether attention is given to all relevant aspects of the software processes that are identified.

This chart provides an overview of the overall score as well as the score per process attribute.



Overview of Assessment Results

	Score	Existence	Inspected	Responsibility	Usability	Technical
		Documented	Recordings	Training	Stability	support
Organisation	●	●	●	●	●	●
Project Management	●	●	●	●	●	●
Quality Management	●	●	●	●	●	●
Configuration and Change Management	●	●	●	●	●	●
Measurement	●	●	●	●	●	●
Requirements Engineering	●	●	●	●	●	●
Design and Implementation	●	●	●	●	●	●
Testing and Integration	●	●	●	●	●	●
Transfer, Operations and Maintenance	●	●	●	●	●	●
Total	●	●	●	●	●	●



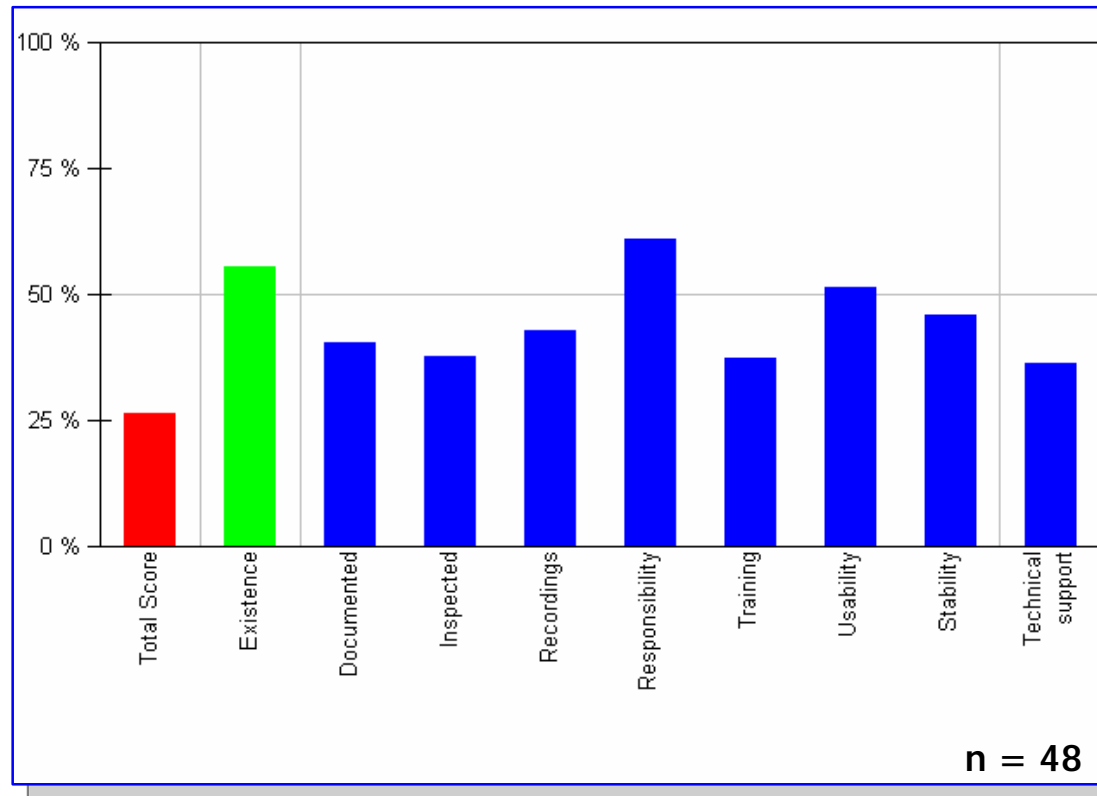
The relative scores give you an indication of the particular strengths and weaknesses for each process area and each attribute.

Extremely strong and weak points are easily spotted using this chart.

This chart provides an overview of all scores.



Process Existence per Attribute



The relative scores gives you an indication of the existence of the processes associated with each process area.

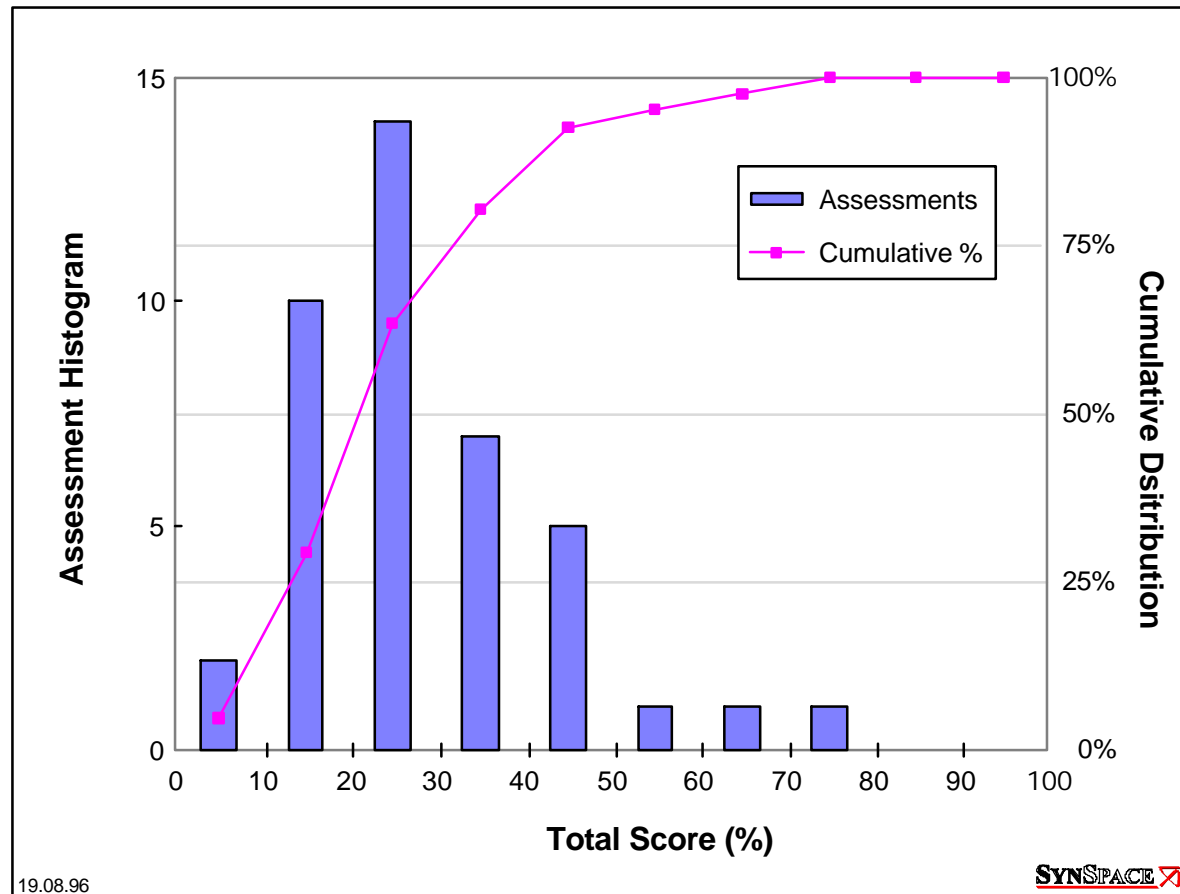
Scores below 75% indicate the absence of software processes that are in most cases essential.

Processes that are supposed to be irrelevant in your case can be set to *Not Applicable*.

This chart provides an overview of the overall existence as well as existence per Process Area.

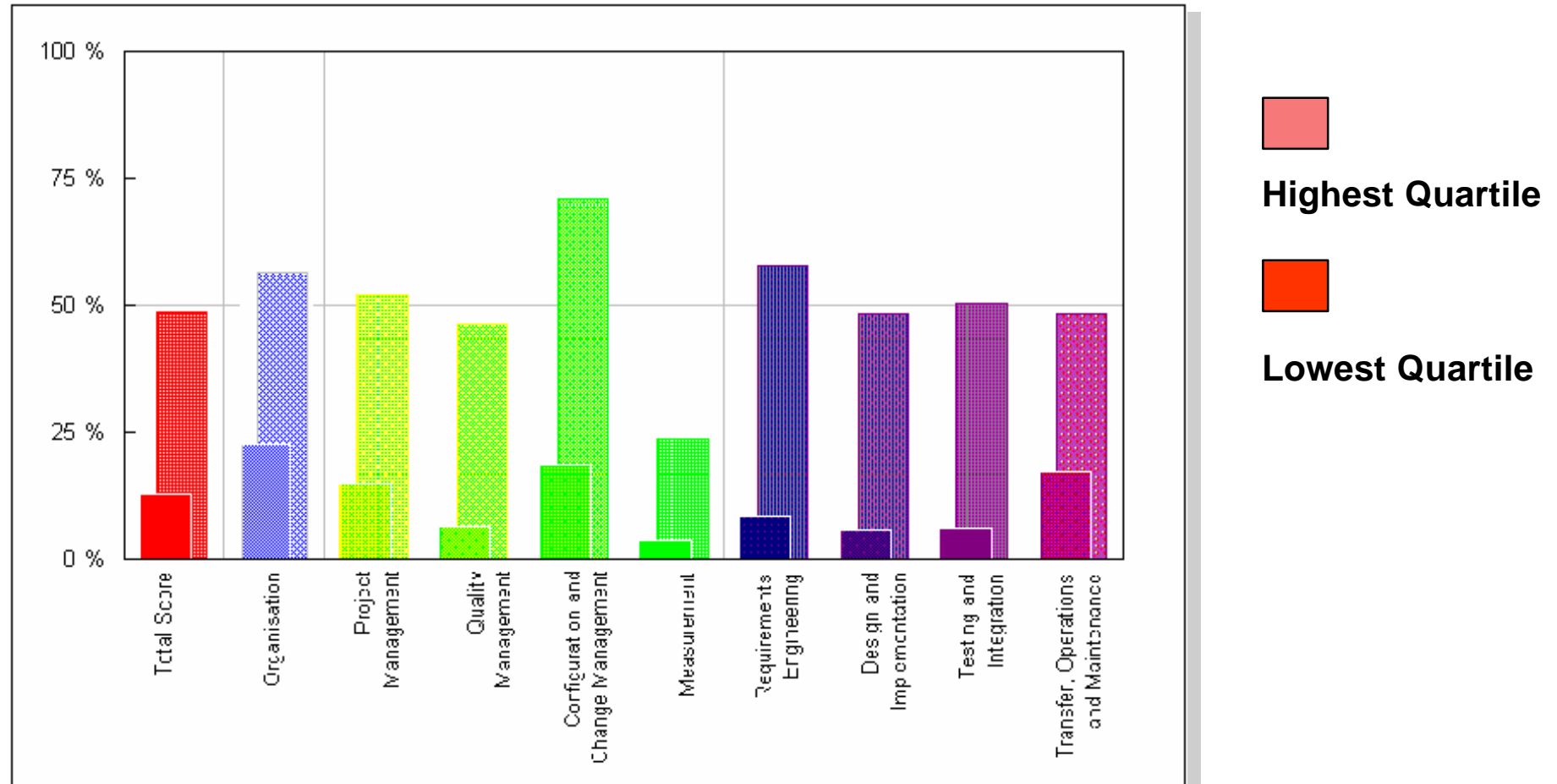


Assessment Results



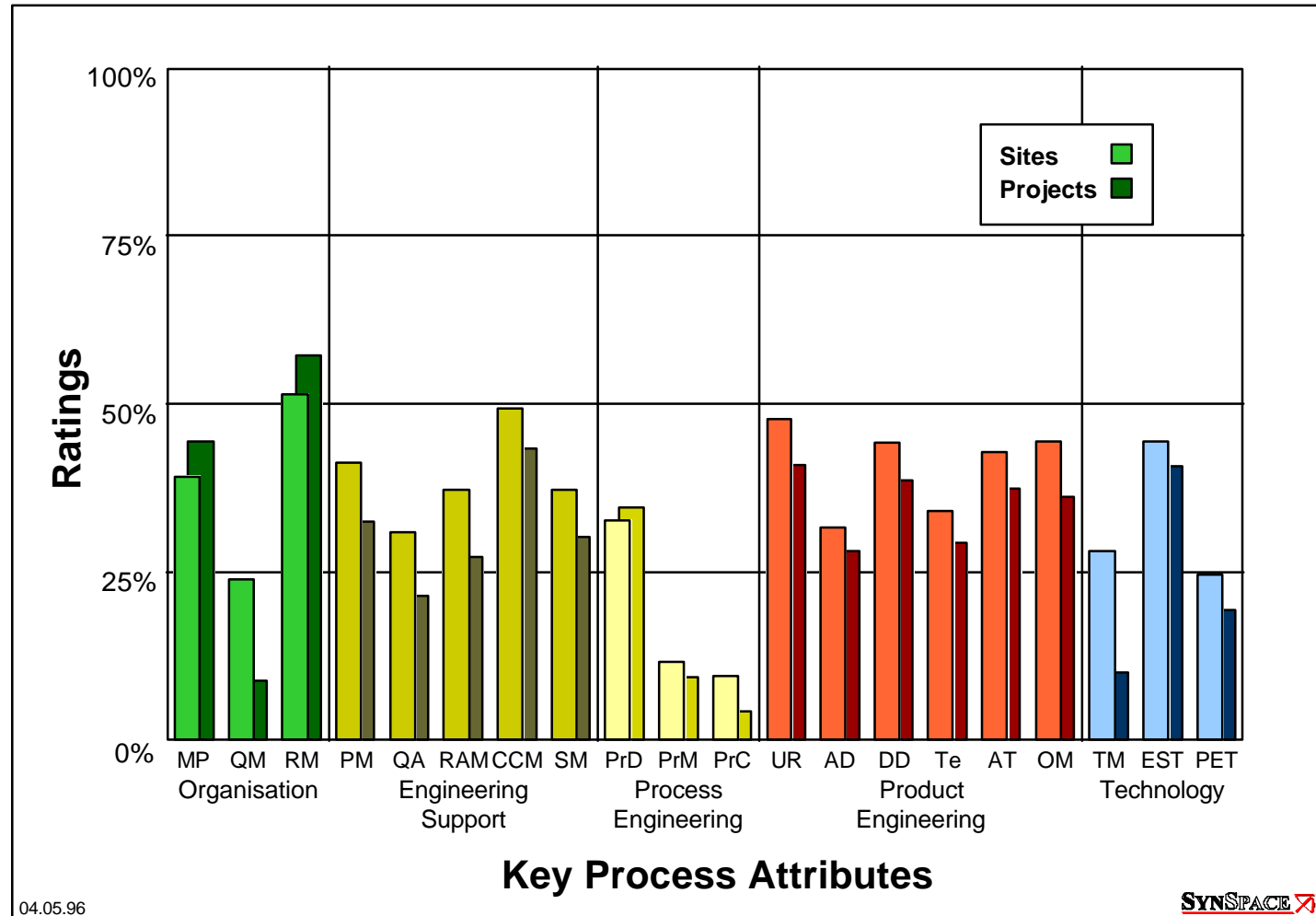


Comparative Analysis





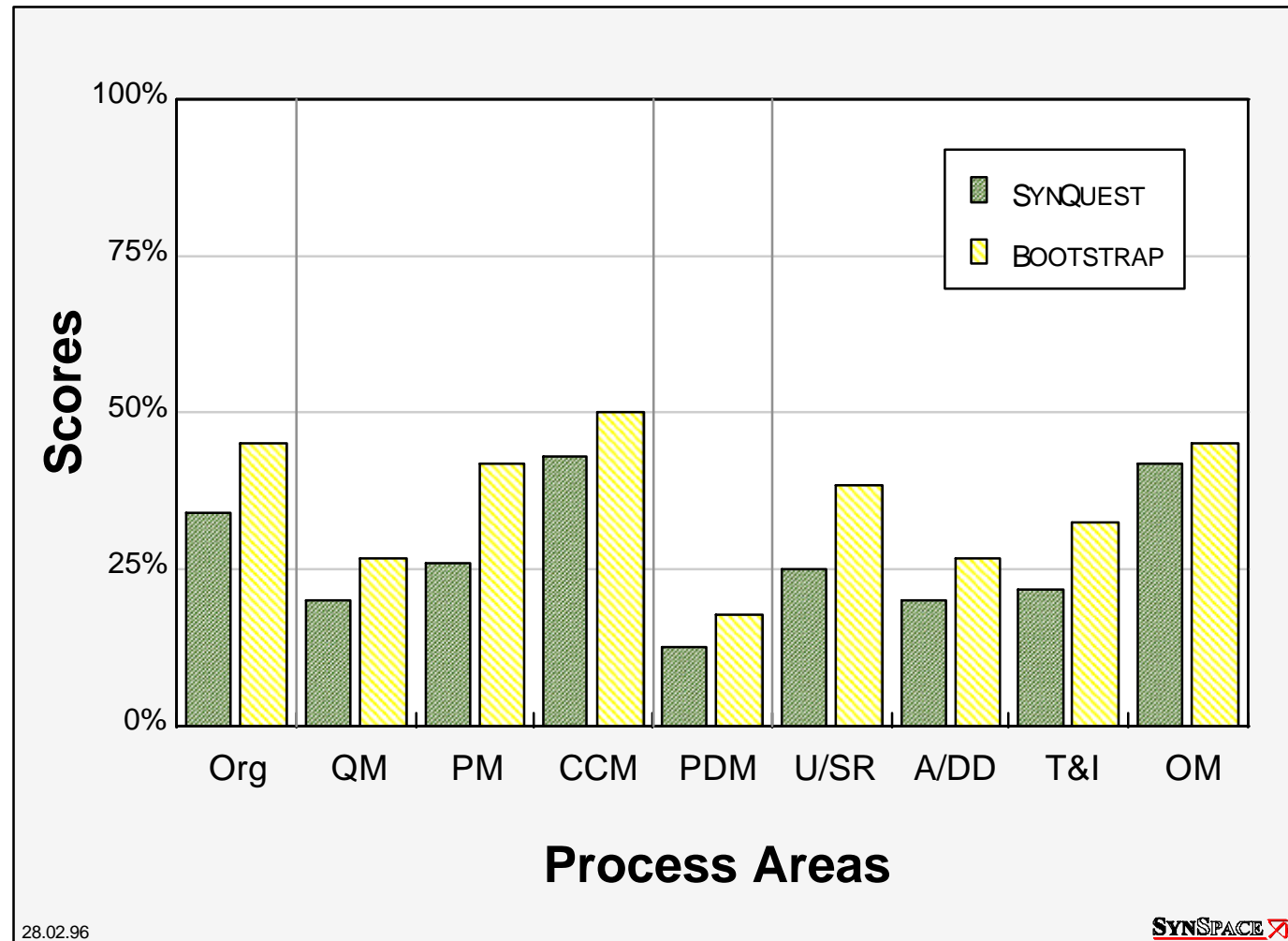
The BOOTSTRAP Average Profile



Mgmt. Practices
Quality Mgmt.
Resource Mgmt.
Project Mgmt.
Quality Assurance
Risk Avoidance
Configuration Mgmt.
Subcontractor Mgmt.
Process Definition
Process Measurement
Process Control
User Requirements
Architectual Design
Detailed Design
Testing & Integration
Operational Support
& Maintenance
Technology Mgmt.
Engineering Support T.
Process Engineering T.



BOOTSTRAP vs. SPiCE-Lite





Assessment Benefits

- ❖ Direct available resources towards key issues
 - ❖ Align the organisation to clear targets
 - ❖ Make processes explicit
 - ❖ Improve communication and coordination
 - ❖ Obtain true picture in short time
 - ❖ Set feasible objectives
-
- ❖ Initiate and sustain software process improvement

