What is SPiCE 1-2-1?

SPiCE 1-2-1 is the self assessment tool for software development organizations and projects to evaluate and analyze their software development processes according to ISO/IEC IS 15504.

You perform an assessment to determine your strengths and weaknesses concerning your way of developing software.

Use SPiCE 1-2-1 to rate selected processes for software development for a project within one or two days.

The result contains comprehensive evaluations and analysis in the form of charts. If demanded, a report can be generated.

The rating can be done on your own, within a group of your organization (Self-Assessment) or it can be guided using the help of a consultant (Guided Self-Assessment).
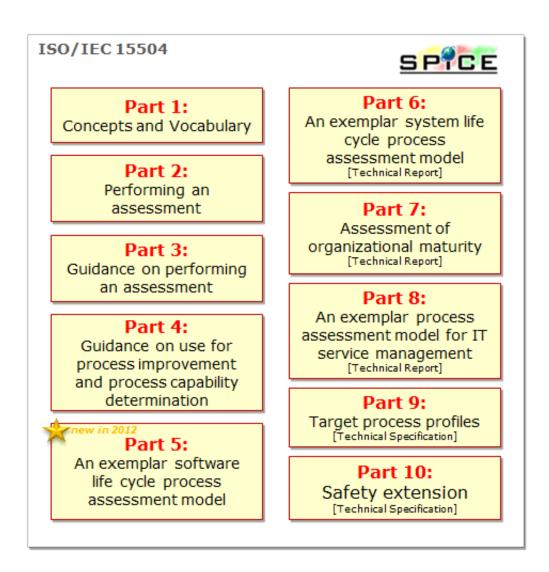
You can also perform externally assistet assessments and have the rating done by trained, experienced assessors. Contact us, we'll be happy to advise you about the ideal way how to perform an assessment!

About ISO 15504 and SPiCE:

ISO/IEC IS 15504 is an International Standard to assess software development processes.

At the beginning ISO 15504 was named SPiCE which is just an abbreviation for Software Process Improvement & Capability dEtermination.
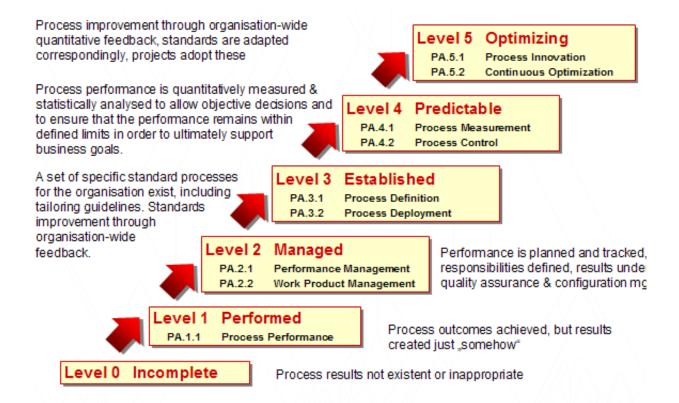
The standard contains ten parts. Part 1 to 5 are the normative parts; 6 to 10 are enhancements which extend the useability and adoptability of the process capability concepts to new process areas and new business branches:

ISO/IEC 15504

Part 1: Concepts and Vocabulary

Part 2: Performing an assessment

Part 3: Guidance on performing an assessment

Part 4: Guidance on use for process improvement and process capability determination

new in 2012 **Part 5:** An exemplar software life cycle process assessment model

Part 6: An exemplar system life cycle process assessment model [Technical Report]

Part 7: Assessment of organizational maturity [Technical Report]

Part 8: An exemplar process assessment model for IT service management [Technical Report]

Part 9: Target process profiles [Technical Specification]

Part 10: Safety extension [Technical Specification]

The assessment tool SPiCE 1-2-1 covers part 2 fully and part 5 sufficiently for any assessment and education purpose. The other parts of the standard were significantly taken into consideration for the development of the assessment tool. Especially part 7 is fully implemented, so that you can use the tool to calculate your "Organizational Maturity Level".
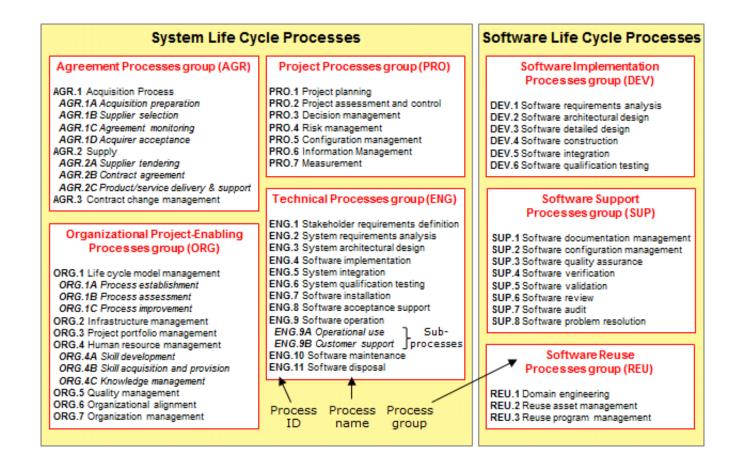
Well, the whole concept of SPiCE is based upon a reference model with processes having a defined capability dimension. Of course, the development of SPiCE was influenced by the CMM (Capability Maturity Model). Concerning this topic, please have a look at .

So SPiCE has defined the following Capability Dimension:

Process improvement through organisation-wide quantitative feedback, standards are adapted correspondingly, projects adopt these

Level 5   Optimizing
PA.5.1   Process Innovation
PA.5.2   Continuous Optimization

Process performance is quantitatively measured & statistically analysed to allow objective decisions and to ensure that the performance remains within defined limits in order to ultimately support business goals.

Level 4   Predictable
PA.4.1   Process Measurement
PA.4.2   Process Control

A set of specific standard processes for the organisation exist, including tailoring guidelines. Standards improvement through organisation-wide feedback.

Level 3   Established
PA.3.1   Process Definition
PA.3.2   Process Deployment

Level 2   Managed
PA.2.1   Performance Management
PA.2.2   Work Product Management

Performance is planned and tracked, responsibilities defined, results under quality assurance & configuration mg

Level 1   Performed
PA.1.1   Process Performance

Process outcomes achieved, but results created just „somehow"

Level 0   Incomplete

Process results not existent or inappropriate

The underlying concept of SPiCE uses these attributes (PA is just short for Process Attribute) - which form the capability dimension of the model - in the same way for all processes. The advantage is, that once you understood the PAs, you not only can use them for processes part of the reference modell, but also for processes from other process reference modells or especially for your own business processes. This generic charcterization gives you an outline for the journey of process improvement - no matter which sort of proceses you have.

The current version of SPiCE - we call it SPiCE 2012 - contains the following 60 processes whereas 15 of them are so called sub-processes:

System Life Cycle Processes

Agreement Processes group (AGR)

AGR.1 Acquisition Process
  AGR.1A Acquisition preparation
  AGR.1B Supplier selection
  AGR.1C Agreement monitoring
  AGR.1D Acquirer acceptance
AGR.2 Supply
  AGR.2A Supplier tendering
  AGR.2B Contract agreement
  AGR.2C Product/service delivery & support
AGR.3 Contract change management

Organizational Project-Enabling Processes group (ORG)

ORG.1 Life cycle model management
  ORG.1A Process establishment
  ORG.1B Process assessment
  ORG.1C Process improvement
ORG.2 Infrastructure management
ORG.3 Project portfolio management
ORG.4 Human resource management
  ORG.4A Skill development
  ORG.4B Skill acquisition and provision
  ORG.4C Knowledge management
ORG.5 Quality management
ORG.6 Organizational alignment
ORG.7 Organization management

Project Processes group (PRO)

PRO.1 Project planning
PRO.2 Project assessment and control
PRO.3 Decision management
PRO.4 Risk management
PRO.5 Configuration management
PRO.6 Information Management
PRO.7 Measurement

Technical Processes group (ENG)

ENG.1 Stakeholder requirements definition
ENG.2 System requirements analysis
ENG.3 System architectural design
ENG.4 Software implementation
ENG.5 System integration
ENG.6 System qualification testing
ENG.7 Software installation
ENG.8 Software acceptance support
ENG.9 Software operation
  ENG.9A Operational use   } Sub-
  ENG.9B Customer support   } processes
ENG.10 Software maintenance
ENG.11 Software disposal

Process ID   Process name   Process group

Software Life Cycle Processes

Software Implementation Processes group (DEV)

DEV.1 Software requirements analysis
DEV.2 Software architectural design
DEV.3 Software detailed design
DEV.4 Software construction
DEV.5 Software integration
DEV.6 Software qualification testing

Software Support Processes group (SUP)

SUP.1 Software documentation management
SUP.2 Software configuration management
SUP.3 Software quality assurance
SUP.4 Software verification
SUP.5 Software validation
SUP.6 Software review
SUP.7 Software audit
SUP.8 Software problem resolution

Software Reuse Processes group (REU)

REU.1 Domain engineering
REU.2 Reuse asset management
REU.3 Reuse program management

These processes are organized in eight process groups AGR, ORG, PRO, ENG, DEV, SUP, REU and QNT. The assignment is just for outlining purpose and has no further influence on the contents.

Just a word concerning the identifier SPiCE 2012: The previous version was called SPiCE IS. IS is the abbreviation for International Standard and represents the versions from 2003-2006. SPiCE IS consists of 48 processes. Upon request, we still have an assessment tool for that version. Before 2003, there was SPiCE TR from 1998 whweras TR means Technical Report. That version had 40 processes.

So far so good. Lots of additional information can be found at the links.