

FiSMA - Finnish Software Metrics Association

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Finnish Software Metrics
FiSMA
Association

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Content of presentation

- Background and history of FiSMA
- FiSMA memberships
- FiSMA services for members
- Shortly about ExperiencePro
- Shortly about FiSMA SPICE
- Latest idea: SPI support for members
- Discussion about cooperation



Finnish Software Metrics
FISMA
Association



Short history of FiSMA

- LATURI development project started in 1990, IT Development Center of Finland
- LATURI User Group started in 1992
- Renaming of LATURI to Experience Pro in 1997, moved to STTF
- User Group renamed to FiSMA in 1998
- Extension to SPICE in 1998
- Active member of FESMA/MAIN since 1994



Why new name FiSMA?

- In early 1990 's members were passive, only "users"
- Some new areas of measurement and SwE standards came relevant (SPICE etc)
- So, we changed the image and renamed our network to FiSMA
- Now FiSMA is promoter of sw measurement in Finland, Scandinavia, Baltic states and in Russia



Measurement assets in FiSMA

- More than 500 projects analysed and collected in Experience database, largest data set in Europe.
- More than 1200 projects from ISBSG available for comparison and analogy packaging.
- More than 1000 SPICE process instances collected in FiSMA SPICE database
- Excellent source for comparison and learning



FiSMA memberships

- 1) General membership, participation in ISO/IEC JTC 1 SC7 (Software and Systems Engineering), information services and common seminars
- 2) Experience Pro membership, including method and tool license
- 3) FiSMA SPICE membership, including method and tool license



Structure of FiSMA memberships

General membership
(compulsory for all members)

+ Separate SPICE membership
(FiSMA SPICE license owners)

+ Experience Pro membership
(license owners),
includes
general
membership



FiSMA member companies

- Most large software companies and hi-tech companies, totally ~ 40 members (general, SPICE or Experience Pro)
- About 25 members have Experience Pro method and tool license
- Almost 30 members have FiSMA SPICE method license



FiSMA activities, general membership

- Meetings and seminars for members, so that all are able to meet and listen the top experts in the software engineering and measurement fields.
- Participation in ISO standardation in the software process and measurement areas (ISO/IEC JTC1 SC7 mandate in Finland).
- Information dissemination by sending information packages to members, consisting of draft ISO standards, method packages, research reports, articles and other information in software engineering, measurement and quality areas.



FiSMA Activities, Experience

Pro membership

- Activities in ISO SC7 WG12 and with COSMIC standard proposal for functional sizing.
- Experience PRO estimation tool and experience database development, management and support.
- Method development for members in functional sizing and estimation areas.
- Working Groups preparing new interpretation rules and counting practises in functional sizing and estimation areas.
- Collection of cross-industrial data base for comparison and benchmarking purposes.
- Intensive method training publicly and in member companies.
- Strong support for use of Experience Pro method and tool.



FiSMA Activities, SPICE membership

- FiSMA SPICE Method development and support. The method is based on ISO 15504 (SPICE) standard.
- Participation in ISO SC7 WG7, WG10, WG18 and WG13 working groups.
- Competent Assessor training.
- Competent Assessor certification scheme.
- SPICE assessments for members.
- Support for self-assessment in member companies.
- Other related topics, for example ISO9000 and CMMI.



FiSMA partnerships

- In R&D:
 - INSEAD + IESE in statistical research of project data
 - Pori University unit in SPICE
 - ESI in some services (BITS + reuse training)
 - Many other research units in focused topics
- in Business:
 - SweSMA in Sweden (first attempt in 2000), Nordic SMA (to be launched)
 - BaSMA (launched 16.1.2001)
 - RuSMA in Russia (initiated in 2000, to be launched)



Links to ISO

- General responsibility of SC7 in Finland
- Very active participation in WG10, SPICE
- Active participation in WG12, Functional Sizing
- Reasonable participation in ISO12207, ISO15288, ISO9000-3:2000...
- “Future is COSMIC”, we are original contributors of many international standards and methods



Software management and what we have covered in estimation branch...

- Problem factors (function points)
- Project factors (5 productivity factors)
- Process factors (5 productivity factors)
- Product factors (6 productivity factors)
- People factors (5 productivity factors)
- Policy factors (so far out of scope....)
- Past factors (114 analogy sets)
- *"4-5-6-7 P- theory of software management"*



Release of Experience Pro in 1997

- Commercialisation of Laturi
- Internationalisation
- New concept for data collection, no free tickets anymore
- Tool improvement and training services
- Internet based support functions



Current version ExperiencePro 3.0

- New technical solution, new tool
- New approach in Functional Sizing, the KISS method
- Good integration of all known existing sizing methods
- Different tools for New Development and Maintenance
- etc....



Adoption of SPICE (ISO15504) in Finland

- First start in Finland already when ISO work started in 1993, some links with ISO9001
- Some companies have participated in SPICE pilots since 1993
- Joint investment of TietoEnator and STTF in 1998 to create a self-assessment method based on SPICE
- FiSMA adopted SPICE in 1998, FiSMA SPICE assessment method was developed



General description of FiSMA SPICE (SPICE Pro2)

- FisMA SPICE Pro2 is fully compliant with ISO15504 (SPICE) standard (TR 2, 1998 version, 2002 version)
- is fully based on ISO15504 Part 5, The Exemplar Assessment Model
- is updated to be fully conformant with new ISO15504
- includes some extensions and refinements in capability indicators compared to reference model
- is a detailed method for self-assessment purpose
- is available for all FiSMA SPICE members in Scandinavia (currently more than 25 companies)

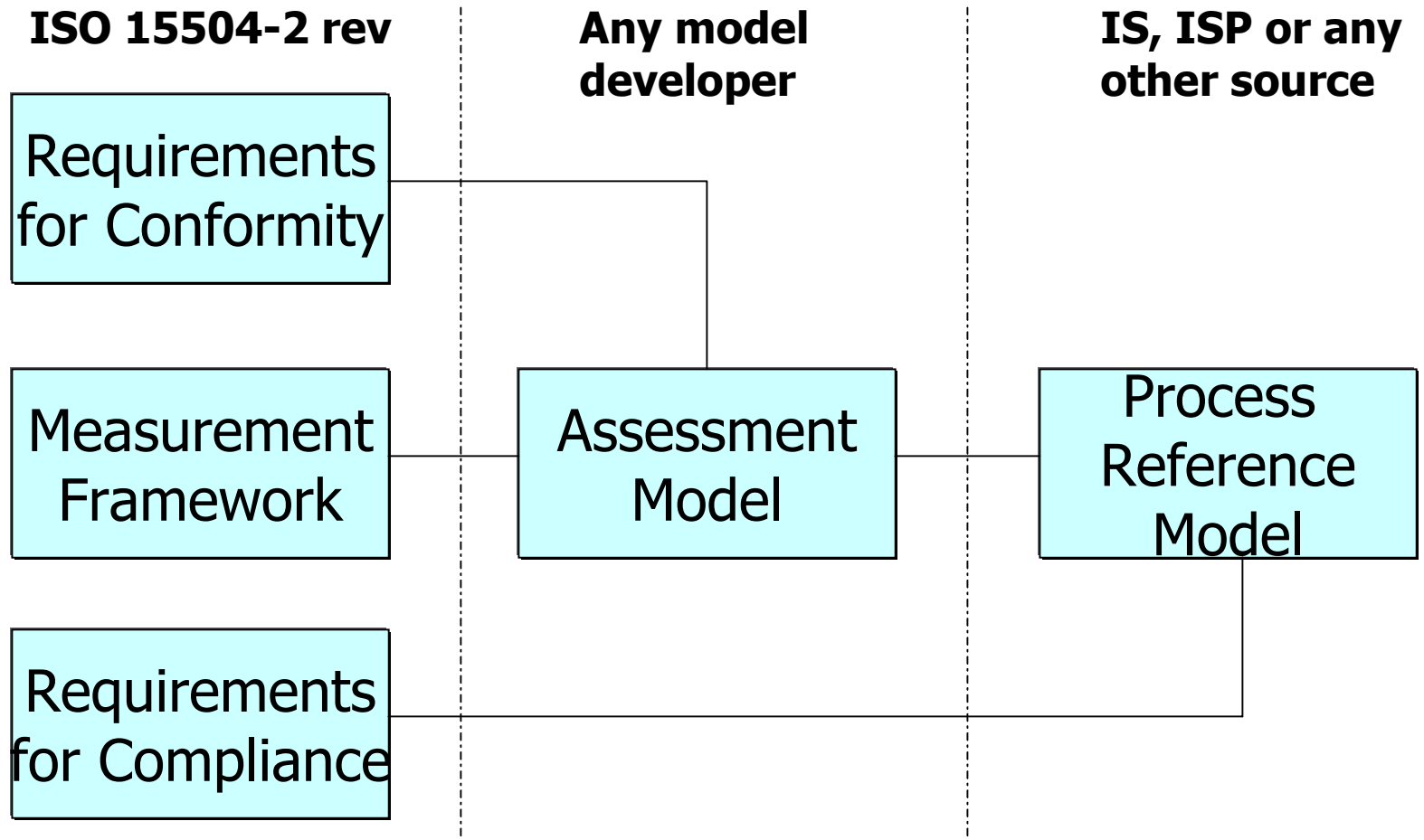


Some selling arguments...

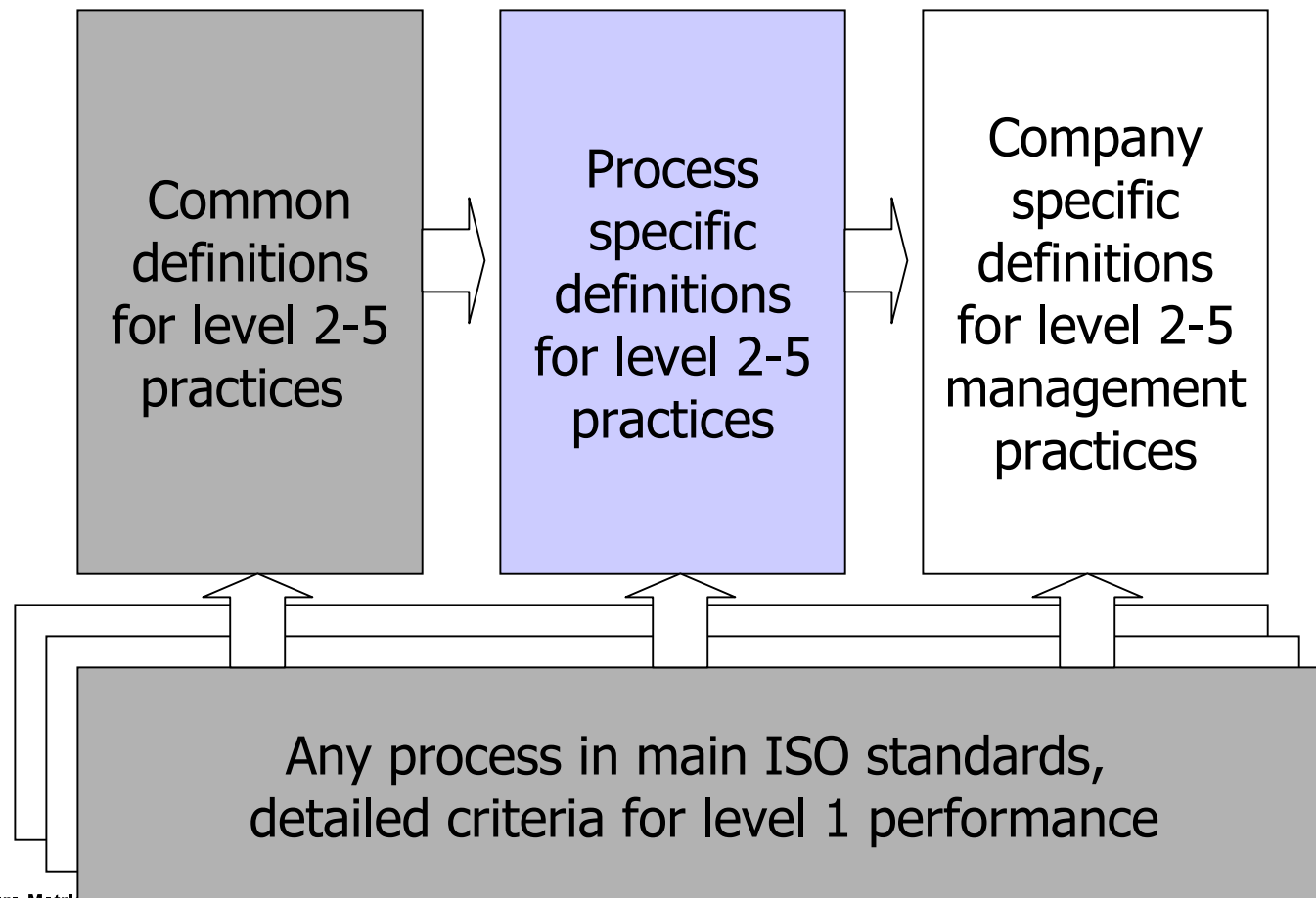
- FiSMA SPICE assessment process is based on more than 1000 process instance assessments
- has templates and models for all generic assessment results
- is supported by assessment tool and results database
- is itself at least at level 3 of SPICE
- is continuously improved based on experiences and feedback



The new ISO architecture



FiSMA SPICE assessment model, key elements



Some details of level 1 process descriptions

- Includes all processes from ISO12207, ISO15288, CMMI etc. (about 100 processes)
- The following details for each process are included in the FiSMA SPICE Pro2 method:
 - base practices of (old and) new ISO15504 Part 5 and other relevant standards
 - work products of new ISO15504 Part 5
 - detailed minimum criteria for each base practice and the level 1 in general
- Includes some new processes for FiSMA members

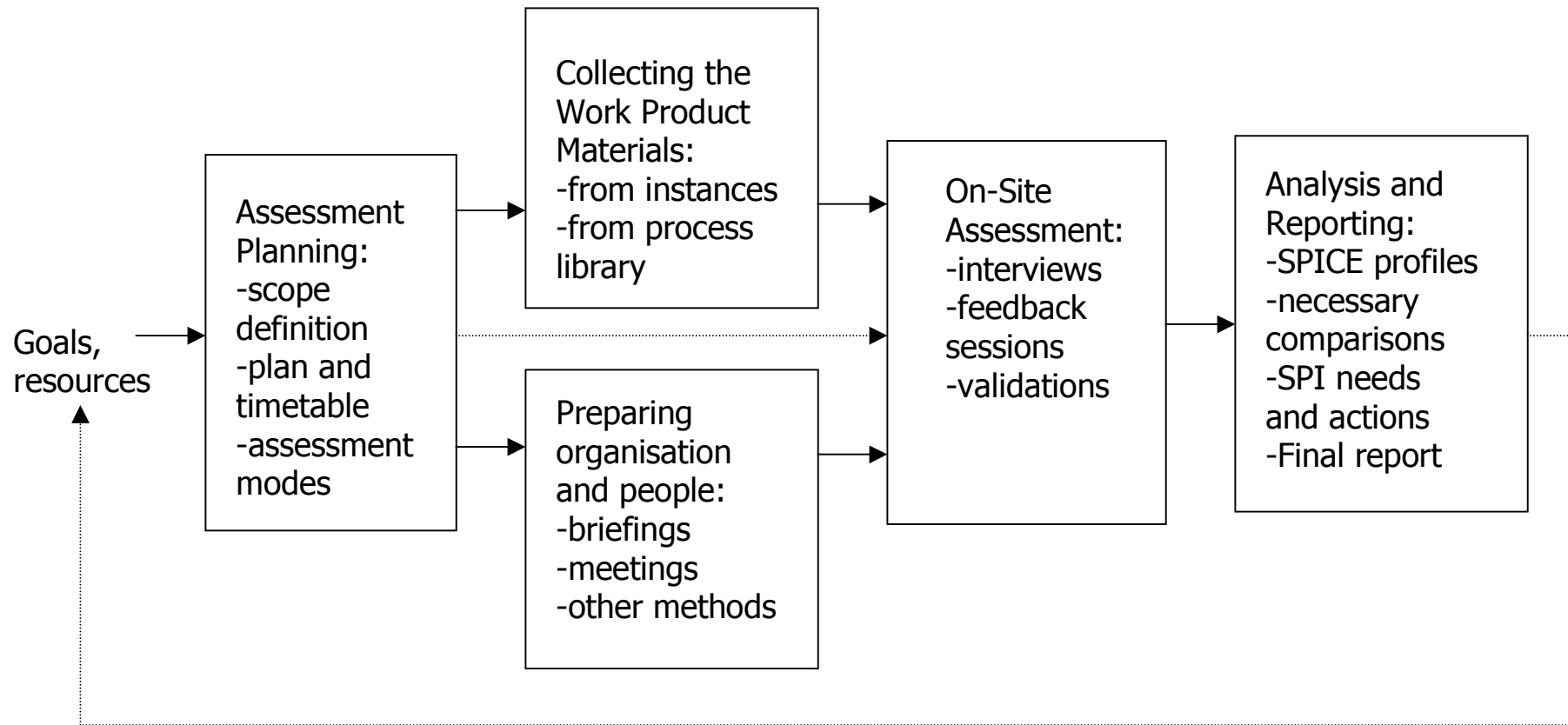


Some details of level 2-5 process descriptions

- Process Attributes as in ISO15504 Part 2
- Generic practices as in ISO15504 Part 5
- Detailed indicators for each process attribute, including:
 - essential characteristics in details
 - related processes
 - generic work product taxonomy and details
 - other process indicators, if essential



The assessment process and activities in FiSMA SPICE

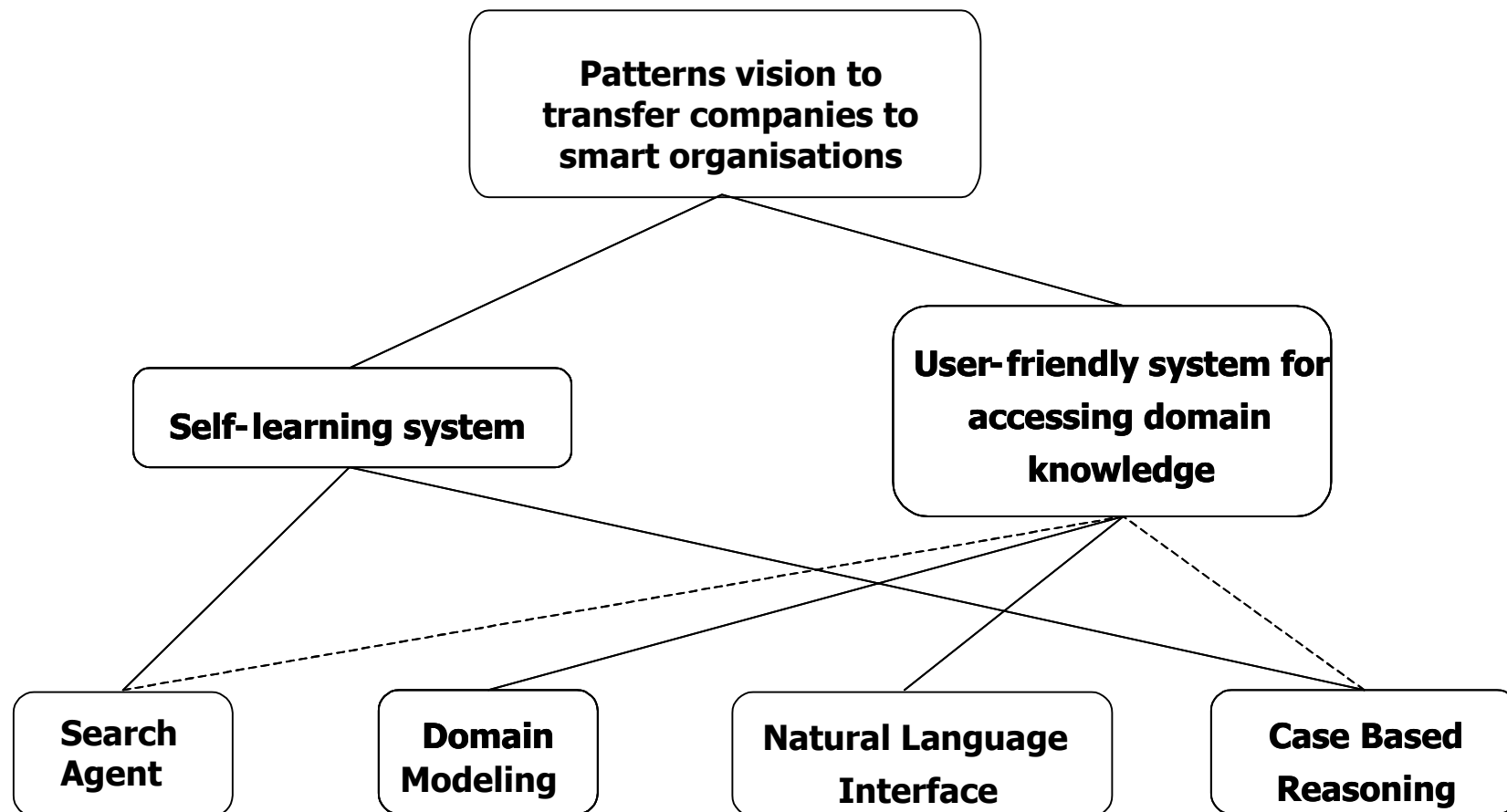


Latest FiSMA service: SPI KM support for companies

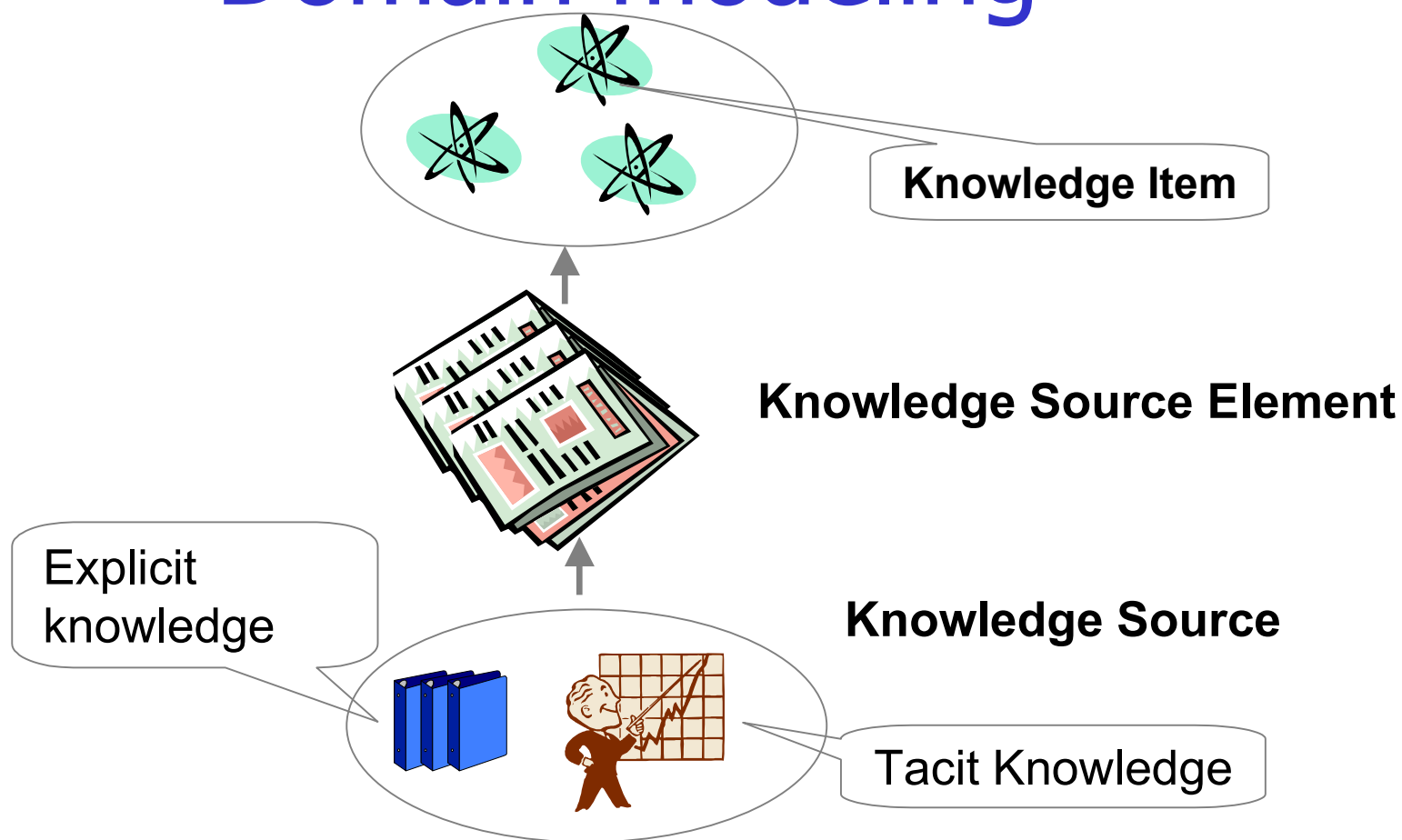
- First attempts in FiSMA already in 1994, then 1998
- Finally, an European consortium was created in 2000 to develop technical solution for SPI support (Patterns)
- Covered domains now (new domains planned): General SPI, Sw Project Management, Software Engineering
- Current status: technical development 50 %, content creation 70 %, user feedback and testing just starting, first pre-commercial release 1/2003



The Patterns approach



Domain modeling



A short example of Knowledge Item

- Context: Process automation for electricity power plants
- Knowledge source: SPICE assessment report + others
- Improvement goal: Traceability of requirements
- Roadmap:
 - Requirements elicitation, CUS.3
 - System requirements definition, ENG.1.1
- Knowledge item component:
 - Process: System requirements definition process
 - Concept Path: Requirements baseline, traceability
 - Partial solution 1: Give ID for each requirement
 - Partial solution 2: Use RM tool
 -



An example of taxonomy and concepts

A. Requirements

elicitation

B1. Business requirement

C1. Customer expectation

C2. User requirement

B2. Analysis of customer needs

B3. Customer needs monitoring

C3. Change control

C4. Communication

C5. Customer query mechanism

