

Foundations for the Integration of Enterprise Wikis and Specialized Tools for Enterprise Architecture Management

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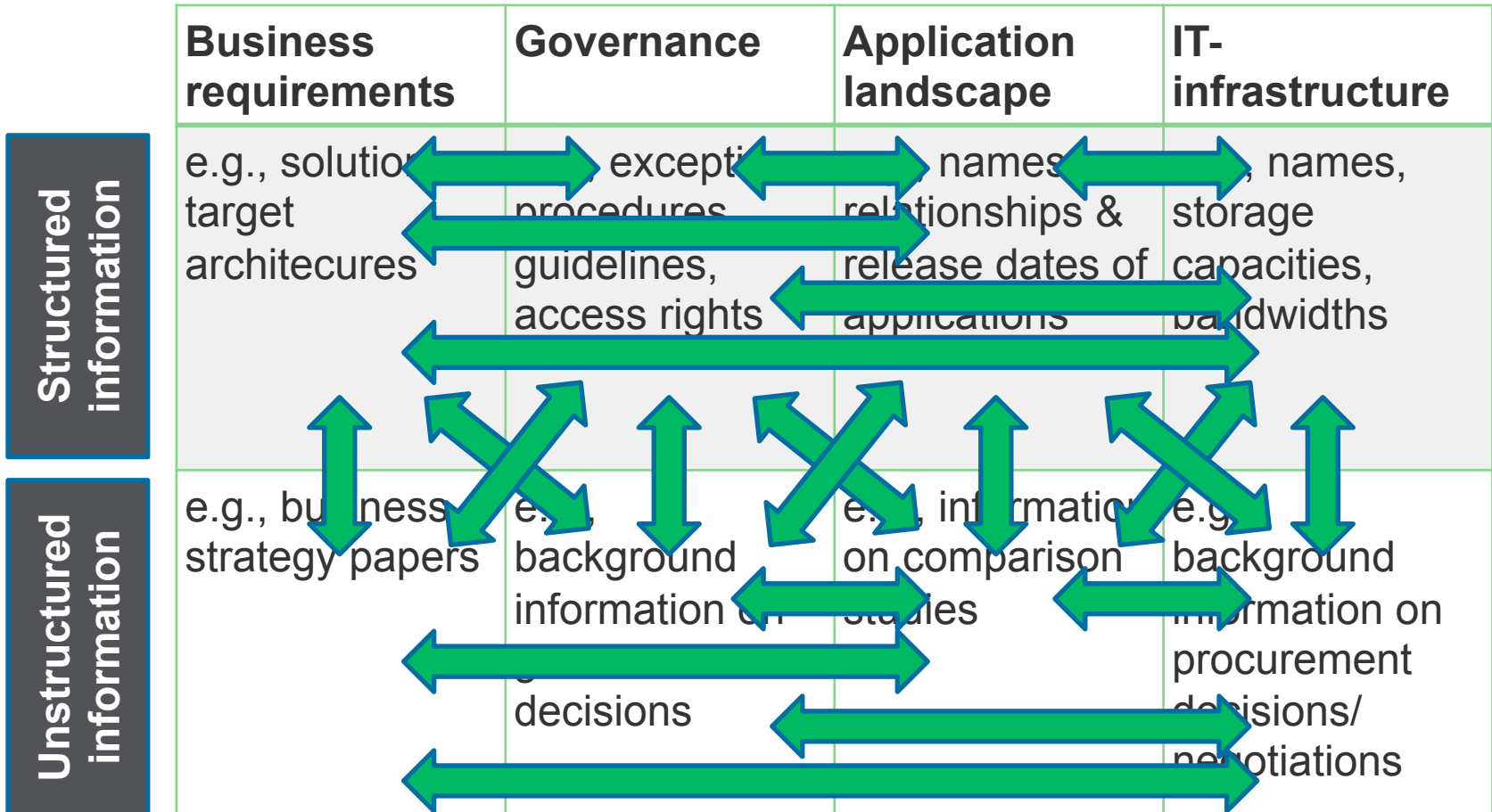
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EAM – information-heavy management function

→ relies on structured & unstructured information

	Business requirements	Governance	Application landscape	IT-infrastructure
Structured information	e.g., solution, target architectures	e.g., exception procedures, guidelines, access rights	e.g., names, relationships & release dates of applications	e.g., names, storage capacities, bandwidths
Unstructured information	e.g., business strategy papers	e.g., background information on governance decisions	e.g., information on comparison studies	e.g., background information on procurement decisions/negotiations

Interdependencies between all sorts of structured and unstructured information!



Support of collection, maintenance, availability and organization of these information crucial

Dedicated EAM-tool

Strengths:

- modeling and retrieving architectural knowledge concepts
- Adjustable rich meta-model

Weaknesses:

- Low accessibility for EA stakeholders outside central team
- Little support for collaboration, communication, navigation in wider document space

Wiki

Strengths:

- Web-based, enable online collaboration
- Communication via notices, RSS feeds, news, Email updates
- Availability and navigation: functionality to link, tag, index, cross-reference and search
→ especially useful for unstruct. Info.
- Easy to learn, fun to use

Weaknesses:

- Little/no functionality for visualization and modeling EA concepts
- No meta-model

Our hypothesis: integration of both Wiki and EAM-tool will improve mgmt. of EA-relevant information

The use of both, Wiki and EAM-tool, and their integration will improve the inclusion and management of relevant structured and unstructured information within the EAM-function

Literature review

- Some findings on the use of a Wiki for EAM instead of an EAM-tool
- First attempt of integration of a Wiki and a visual software tool

Practitioners survey

- 178 participants from 105 organizations
- 7 countries
- About half Enterprise architects
- 0 -10 years of experience

Survey – Participants from many different industries and mostly with expertise on EAM

Industry Sector	n	% of all
IT Consulting	24	22.86%
Finance	18	17.14%
IT Products and Services	9	8.57%
Telecommunications	6	5.71%
Public Service	8	7.62%
Education	5	4.76%
Production and Manufacturing	6	5.71%
Transportation and Logistics	3	2.86%
Health	2	1.90%
Management Consulting	4	3.81%
Other	20	19.05%

Job Title	n	% of all
Enterprise Architect	54	51.43%
IT Architect	15	14.29%
Consultant	12	11.43%
Business Architect	6	5.71%
IT Operations	3	2.86%
CxO	6	5.71%
Software Engineer	1	0.95%
Solution Architect	1	0.95%
Business Analyst	1	0.95%
EA Analyst	1	0.95%
Other	1	0.95%

Survey – Results show significant interest in the research topic among practitioners

Which tools does your organization use for EAM?

Tools for EAM	n	% of all
EA Tool	36	34.29%
Wiki & EA Tool separately	37	35.24%
Wiki & EA Tool integrated	6	5.71%
Wiki	9	8.57%
None of these	14	13.33%
No response	3	2.86%

Do you think a Wiki can be useful (in addition to another tool) for EAM?

Wiki for EAM useful	n	% of all
Yes	98	93.33%
No	7	6.67%
No answer	0	0.00%

Do you plan to use a Wiki for EA management in the future?

Wiki for EAM in future	n	% of all
Yes	63	60.00%
No	13	12.38%
No answer	29	27.62%

Literature – Much on EAM-tools, much on Wikis, little on Wikis for EAM, very little on integration

(Farenhorst et al. 2008)

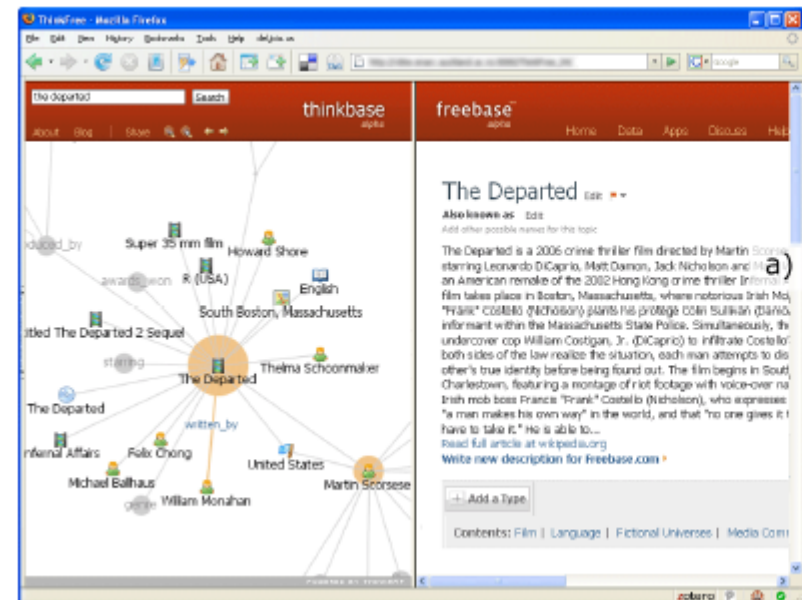
Wiki for EAM instead of dedicated EAM-tool

Advantages:
support for online communication, managing non-architectural knowledge, collaboration support and involving and integrating knowledge and communication needs of other functions within the company

Disadvantages:
lacking out-of-the-box support for modeling and retrieving architectural knowledge concepts

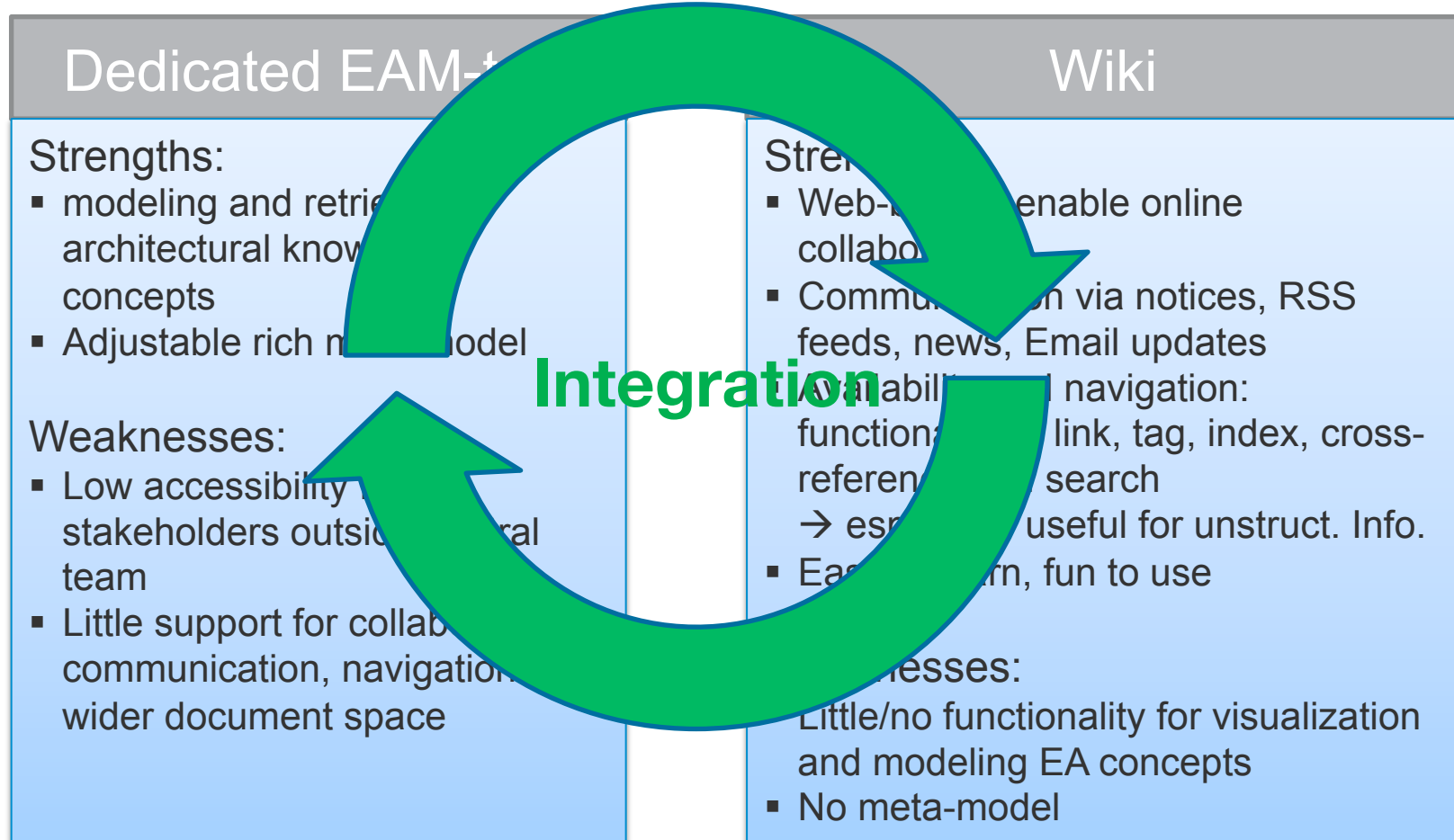
(Hirsch et al. 2009)

Integration of Wiki and visualization software



(Picture from Hirsch et al. 2009)

How to best combine the respective strengths of Wiki and EAM-tool for EAM



Differentiate EA-scenarios by: better supported by Wiki vs. by EAM-tool

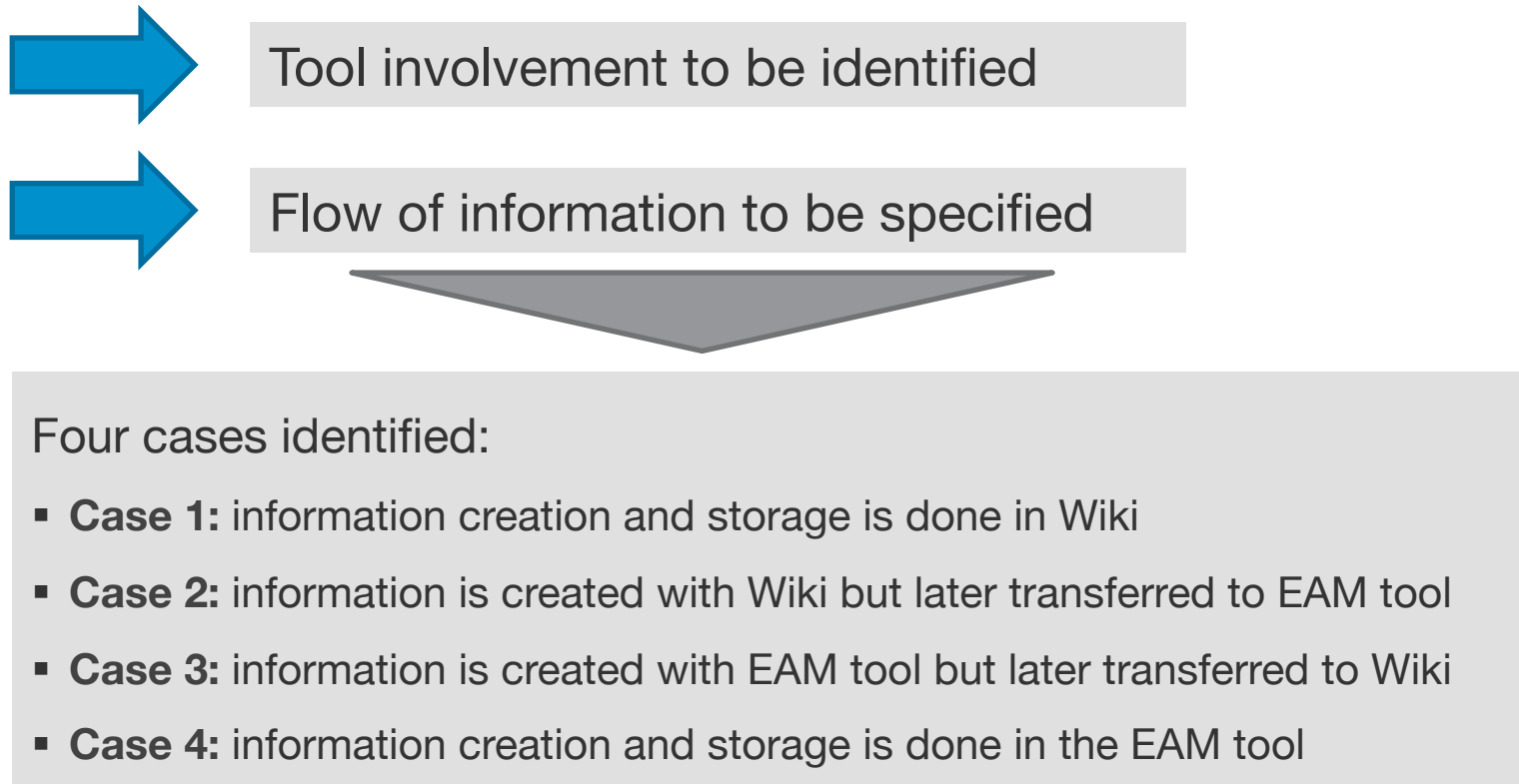
Definition of nine EA scenarios

<p>Definition of terms: glossary of terms to create a common terminological basis.</p>	<p>Providing references to EA relevant documents: EA-information stored in central repository → additional info. distributed over many documents in organization</p>	<p>Document guidelines and FAQs: need to distribute EA stakeholders throughout organization → improve comm. with mgmt. and operations processes</p>
<p>Annotating visualizations: support stakeholder specific views, annotated with detail or background information on application landscape</p>	<p>Discussion of business and EA requirements: Major goal of EAM business-IT alignment. discussion about requirements preserved with unstructured information linked to EA model</p>	<p>Import, edit and validate EA information: Import of ata collected in spreadsheets or from productive systems, also data transformations</p>
<p>Analyze EA information: analysis of EA information by various visualizations, metrics, Stakeholders are architects or the management board</p>	<p>Simulate impacts of EA decisions: formalized theory to describe and compare alternative EA decisions , impacts documented and analyzed</p>	<p>EAM Activities and Workflows: support architects and stakeholders tasks, as documentation of EA, development of planned states, or architecture reviews</p>

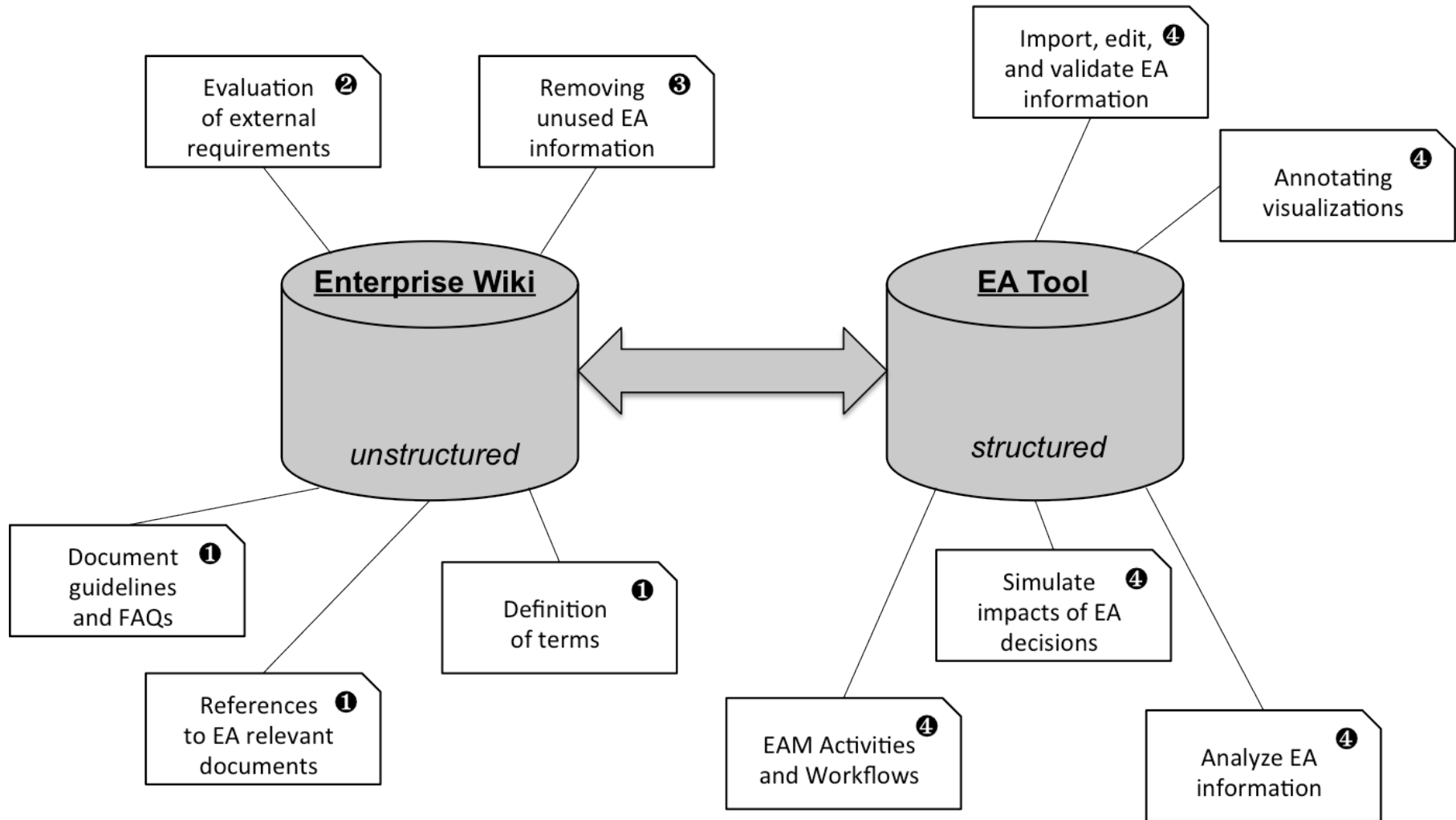
Differentiate EA-scenarios – Relatively clear results of practitioners survey

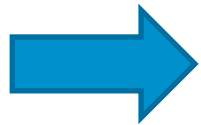
Scenario	Wiki	Rather Wiki	Neither	Rather EA Tool	EA Tool	No Re-sponse
Definition of terms	49,5%	22,9%	4,8%	4,8%	11,4%	6,7%
Providing references to EA relevant documents	38,1%	22,9%	6,7%	13,3%	10,5%	8,6%
Document guidelines and FAQs	51,4%	23,8%	6,7%	4,8%	5,7%	7,6%
Annotating visualizations	9,5%	6,7%	4,8%	30,5%	40,0%	8,6%
Discussion of business and EA requirements	26,7%	21,0%	19,0%	10,5%	11,4%	11,4%
Import, edit, and validate EA information	2,9%	2,9%	3,8%	17,1%	61,0%	12,4%
Analyze EA information	4,8%	1,0%	2,9%	18,1%	65,7%	7,6%
Simulate impacts of EA decisions	1,9%	1,9%	5,7%	17,1%	61,9%	11,4%
EAM activities and workflows	9,5%	7,6%	9,5%	17,1%	47,6%	8,6%

Some cases of EA-processes touch more than one scenario, some scenarios more than one tool

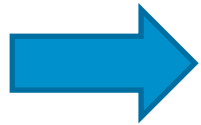


Four cases differentiated by the flow of information – Categorization of 9 EA-scenarios

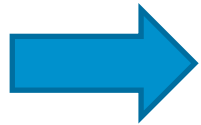




Validation of results in real-life EA-initiatives



Specifications on realization of integration of Wiki and EAM-tool



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