What does DEMO do?

A qualitative analysis about DEMO in practice: founders, modellers and beneficiaries

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Agenda

- ☑ Motivation and goal of the study
- ☐ Research approach and research method
- ☐ Research results: interviews analysis
- ☐ Research limitations and conclusion

Motivation and goal of the study

- Our motivation is exploratory
  - Investigate the actual use of DEMO from stakeholders' perspective to know how DEMO is seen by field people
- Goal of the study
  - Gain insights about the use of DEMO in practice

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Qualitative research approach

DEMO stakeholders have their own assumptions, beliefs and perceptions

We used a qualitative research approach to “capture data on the perceptions of local participants”

Research method

- Data collection: semi-structured interviews
  - Individual interviews from May to June 2012
    - Purposive snowball sampling technique
  - Interviews were audio-recorded
- Data processing
  - Records were transcribed, with additional indications when available (“laugh” “hesitation”)
- Data analysis:
  - With the “coding” technique
  - Coding= tagging pieces of data (here, pieces of text)
    - First cycle coding: Inductive coding
      - Codes 1 emerged from the text (e.g. descriptive coding)
    - Second cycle coding: Pattern coding
      - Codes 1 were gathered in categories (codes 2)
      - Codes 2 were then matched to Design Science themes

Interview guideline themes

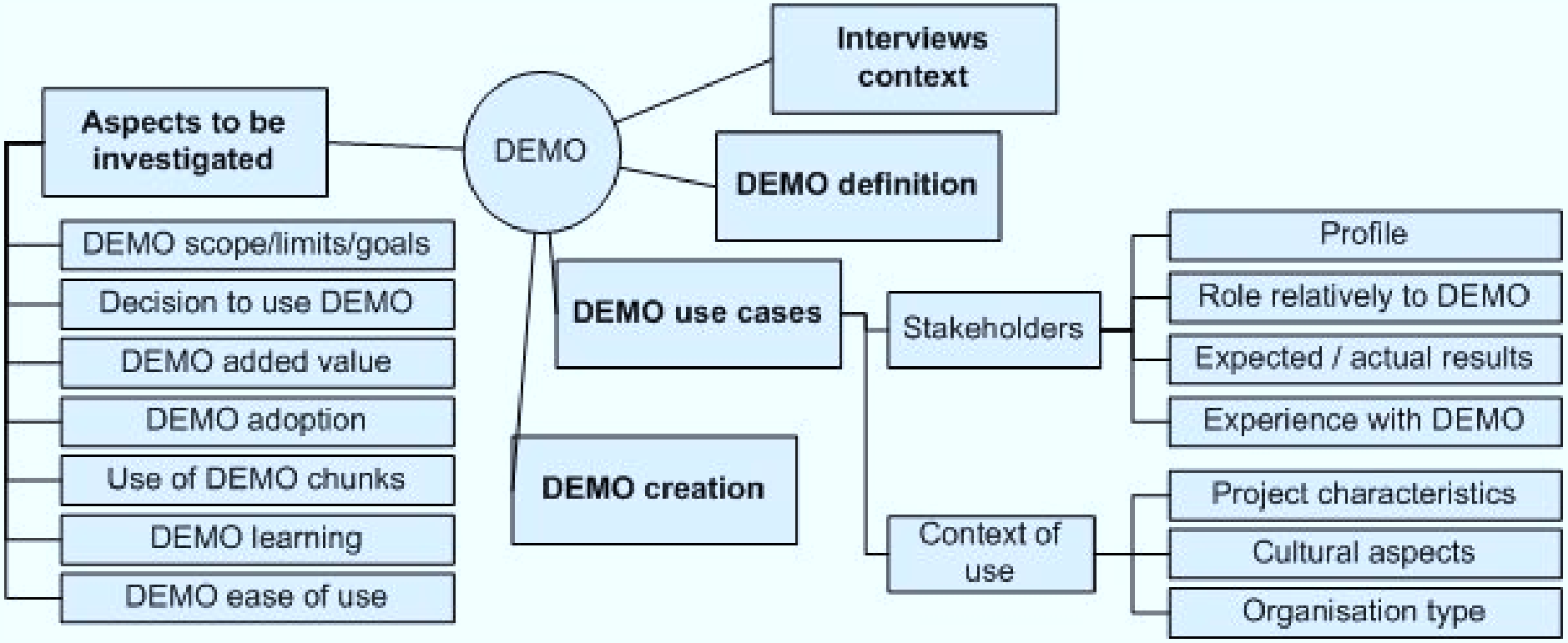
- Sources of information to define the themes
  - DEMO is a design artefact
  - Design science (DS) is relevant to reflect upon DEMO.

  - Interview guideline's themes are
    - Based on DS literature
      - about Artefacts evaluation
      - about criteria of progress for Information Systems (IS) design theories (Aier and Fischer, 2010).
        - » Aier and Fischer argue that criteria of progress for IS Design Theories should be close to DS criteria to look at artefacts
        - » So we used their criteria to look at DEMO
    - And on a brainstorming with fellow researchers

Interview guideline themes

- Themes we investigated

  (Some are not analysed in the paper)



Interviews setup

- Individual interviews
- 13 stakeholders were interviewed
  - Founders (2)
    - Involved in creating DEMO
  - Modellers (5)
    - Very experienced with DEMO, worked on several projects
  - Beneficiaries (6)
    - Involved in workshops to produce DEMO models for their projects
    - Less experienced with DEMO
- 2 interviewers
  - Céline Décosse – was not acquainted with DEMO
  - Niek Pluijmert – DEMO master

Sample questions

- How would you explain what DEMO is to people who do not know it in a few words? (DEMO definition)
- In what cases would you (not) recommend to use DEMO?
- What was DEMO added-value in your project?
- Was DEMO easy to learn? What is the learning curve?
- How did you discover DEMO?

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Results

- Collected data
  - 1h20 average duration, 20h total
- Projects in which DEMO was applied
  - Interviewees mentioned 20 situations where DEMO have been applied
  - For the analysis we focused on 2 situations
    - VISI
    - Air France KML Cargo Information Technology (IT) merge

    - Here are SOME results

DEMO definition	DEMO purpose and scope	DEMO beneficiaries	DEMO outcomes and added-value	Required conditions to apply DEMO

Results

“precise quote from an interviewee

“precise quote from another interviewee saying something about the same theme”

Precise quote from an interviewee

Precise quote from another interviewee saying something about the same theme

DEMO definition

DEMO definition

- DEMO is a way of thinking that comes with a way of modelling – Convergence

DEMO is a formal language and definitely a way of thinking, yes!

It is a very good tool, a way of thinking to produce the VISI standard

It is actually a way of thinking. Not more.

I've never known the distinction between the methods and the methodologies but I think it's a way of thinking

It is constantly in the back of your mind when you are looking at things

- Applying the way of thinking without using the modelling is still using DEMO - Convergence

DEMO definition

- Is DEMO a method?
  - First intentions, explained by a DEMO author:

It was not my idea in fact to develop a methodology. […] But the main thing I developed (…) is the psi-theory, a theory about the operation and construction of organisations.

Methodology is just a word to indicate that (…) DEMO has an underlying theory, whereas a method normally does not need to be founded on a theory.

DEMO definition

- Is DEMO a method?
  - When answering, interviewees assigned different definitions to the word “method”

Interviewees who referred to the “5 ways” definition of a method (Seligmann et al.) diverged:

Yes, it is a method because… it has a way of thinking
No, it is not a method because… it is a way of thinking BUT
the way of working is not so well defined
the tooling is poor
there are some weaknesses in the way of modelling.

DEMO definition

- Is DEMO a method?
  - When answering, interviewees assigned different definitions to the word “method”
  - Other interviewees said:

DEMO is a method with a built-in language inside but it could have been used with another language, it’s mainly a method.

I see DEMO as a powerful method of modelling transactions and information, not as a language

DEMO is a descriptive methodology

NO CONVERGENCE about the word “METHOD”

CONVERGENCE about DEMO being a way of thinking The modelisation language is seen as a part of DEMO… or not.

DEMO purpose and scope COMPLEMENTARY points of view

DEMO purpose and scope

- DEMO is a power-free business modelling tool

DEMO has nothing to do with power; it has to do with analytical thinking.

- DEMO is appropriate when people need a high-level view of an organisation
  - DEMO can be used "in situations where people have lost the oversight."
  - DEMO supports organisation analysis and decision making related to organizational purposes.
  - DEMO "shows the big picture" and DEMO models are appropriate for designing domain models
    - As such, DEMO can be used as an instrument for business/IT alignment.

DEMO purpose and scope

- For a DEMO founder, DEMO bridges information systems and organizational sciences.
  - Other interviewees support this view when explaining how successful DEMO is to analyze a business in order to design or re-design its IT or non-IT implementations.
- DEMO is valuable in case of organisational change and enterprise transformation.
- DEMO does not help in scoping the problem area. Interviewees are unanimous.

DEMO allows you to decompose the process and the decomposition of course is important to find yourself a new concentration target focus, part of the problem that you need to solve

DEMO beneficiaries
CONVERGENCE

DEMO beneficiaries

- DEMO beneficiaries are architects, not implementers
  - Interviewees answers converge
- Several interviewees suggest that having an engineering background may help

> People with a financial background (…) don't see a design problem when it hits them. So [DEMO modellers] are all mathematicians, of the engineering type, biologists by background.

A manager said: "DEMO is really suited for business architects, not management. I am an exception."

DEMO outcomes and added-value

CONVERGENCE

DEMO outcomes

- DEMO models provide a picture of an organisation in a short time
  - A simple picture of business processes with transactions and responsibilities.
    - Almost all interviewees spontaneously mentioned the words “responsibilities” and “transaction”.
  - DEMO helps in defining responsibilities without assigning them: “first, define; then, assign”.

If you don’t use DEMO (…), it will be a complete different picture with all kinds of roles that are nearly close to the actual way of working

DEMO outcomes

- As many models as modellers?
  - Interviewees converge in saying that two DEMO models of a given situation designed by two modellers would usually not be identical.
  - The cause is modellers' different ways of analysing things as being essential or not.
  - Still, no interviewee suggested that those models would be inconsistent.

- An interviewee explains: DEMO is about interfaces
  - DEMO allows to "concentrate on the interface [between transactions], so the story became very simple."

Organisation

Transactions

DEMO efficiency

- DEMO has a good return on modelling effort

Return on modelling effort ME is one of the reasons why I liked very much DEMO, because it was very very efficient to get highly complicated matters clear.

DEMO added-value

DEMO models provide fidelity with real-world phenomena

+

DEMO helps ensure models completeness

=

DEMO models fidelity with real world phenomena

DEMO enables you to pinpoint what is exactly happening and […] also makes sure that your model is consistent

You can fit the real things in it.

DEMO allows to model “what is actually going on, (…) all the tricks, the non-official way, the way things really work, to get them on the table whereas most modelling is done based on procedure manuals but it is not the way it works.”

DEMO brings you to the core of your business and allows distinguishing between what you have to manage and what you don’t have to manage.

DEMO added-value

- Added-value and DEMO models
  - The construction model is very often mentioned as being “the most outstanding benefit of DEMO”.
  - Interviewees are very positive about DEMO models being “concise”.

- Completeness

The consistency between all DEMO models definitions is the source of DEMO added value. Indeed, it ensures the completeness and the consistency of the DEMO models produced on a project.

DEMO brings out new facts. You see, after 4 years, this fact (…) had not been identified in the hundreds of meetings and all the ARIS drawings they had.

Required conditions for applying DEMO in projects

SOME CONVERGENCE

NO DIVERGENCES

Conditions to apply DEMO in a project

- Management strongly supports the use of DEMO and the project + Management wants transparency
  - DEMO "brings transparency about how the organisation works": there might be people who do not want it

> DEMO brings out new facts. You see, after 4 years, this fact (…) had not been identified in the hundreds of meetings and all the ARIS drawings they had.

- A DEMO expert has to work on the DEMO modelling project.

Curious about

DEMO ease of use
DEMO learning curve
DEMO models that are used
?
Read the paper!

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Biais of the study

- Views of highly educated Dutch people (and a Portuguese one) with an engineering or information systems background.

- Youngest interviewee was 42
  - No “Y generation”, who is supposed to learn and think a bit differently.

- 4 to 8 years elapsed since several interviewees have been in contact with DEMO for the last time
  - Time selects memories
  - Interviewees projects’ success may give a positive flavour to memories about the projects

Biais of the study

- Interviewees who are DEMO consultants may have an interest in praising DEMO.
- Interviewer's profiles and their degree of knowledge of DEMO may also impact the study
  - even if a well-defined research method is supposed to mitigate this risk.
- Only men were interviewed

Validity of research results

- Interviewees mainly referred to two projects during the interviews
  - Air France KML Cargo IT merge
  - VISI
  - Still, some interviewees had experience with several DEMO projects and their views reflect their overall experience with DEMO.
- The findings of this qualitative analysis are restricted to the contexts mentioned by the interviewees
  - They would require further investigation so that we could generalize them to any DEMO project.

Thank you for your attention

Questions are welcome