Process Strategy: Bootstrapping

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Infrastructure evolution

- Evolution
  - Adoption
  - Scaling
  - Innovation: of, in, on
  - Harmonization/restructuring/consolidation
  - Crumbling/fragmentation
- Aims => process strategy
- Appliance or generative II?

A self-reinforcing installed base

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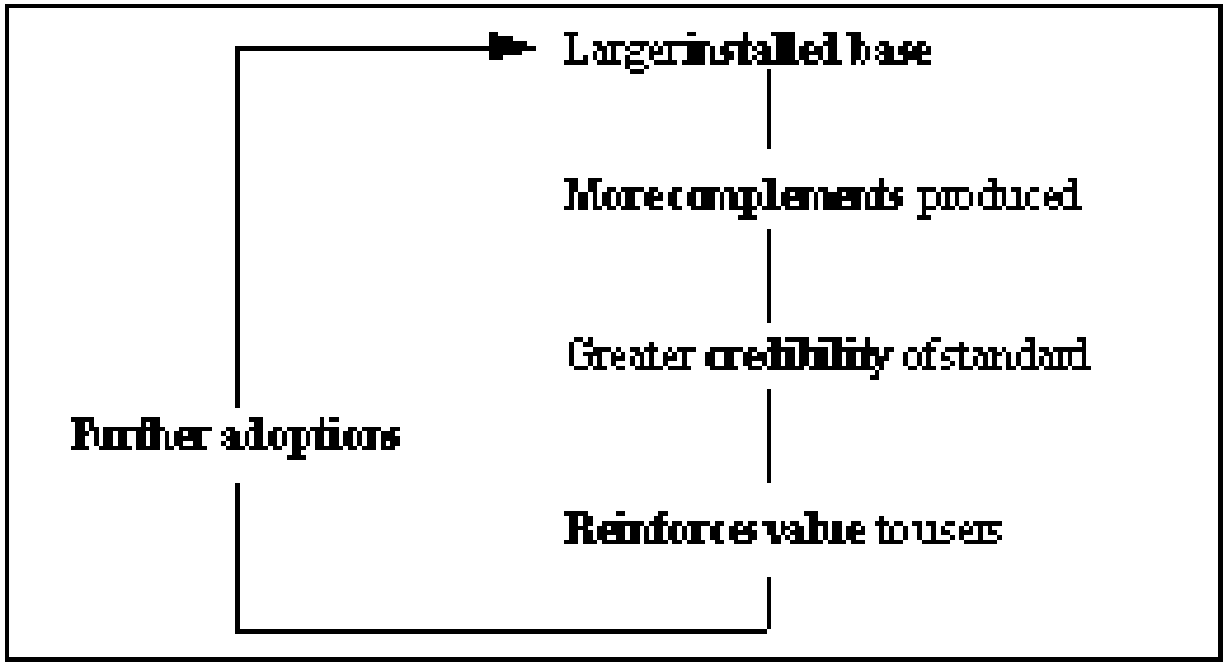


Granovetter/Schelling model

- Ex: Dying seminar, crossing a street

- Our preferences depends on others actions
- Preferences vary
- Processes depends on distribution of preferences
- Small changes may have large effects

Challenges

- Doesn’t take off: No value for few users – everybody waits for the others.

- If it does – it becomes autonomous:
  - Lock-in
  - Develops in undesired directions
  - Increases the problems one tried to solve (reflexive/self-destructive)

Design strategies

1. Specification driven/«Big Bang»
2. Prototype/pilot
3. Living Lab/Installed base cultivation

- 2 fail, one succeds

Strategies (some ideas)

- Flexibility
  - Minimalism, modularisation (loose coupling)
    - (=gateways)
  - Generativity (end-2-end + programmbility)
- Use the installed base as resource
  - Bootstrapping
    - Build upon existing installed bases
    - Build an installed base (users before functions)
  - Avoid lock-ins: Gateways

Growing networks

- “Manipulating” preferences
  - Through design ..
- Arranging users
- Bootstrapping

’Bootstrapping’

- Enclocypedia: ’She bootstrapped herself to the top’ – to manage on one’s own
- Lifting yourselves by your hair
- Booting a computer
- Implementing a programming language
- Language learning
- Making a tool/network by means of the tool/network
- ”Deliver a better today, rather than promise a better tomorrow”.
- Late adopters adopt because the others have already
- First adopters must adopt for another reason

Identifying and arranging preferences

- Multi-dimensional
- Personal, individual
- Use areas and situations
- Technological aspects
- Coordination/governance structures
- Arranging preferences and dimensions (dynamically)

Bootstrapping Network Technologies

- Select motivated and knowledgeable users
- Simple, non-critical, non-complicated use areas where no large organisational changes are required.
- Select simple, relatively cheap and well supported technical solutions.

- Users first, then functionality/technology

Individual/personal preferences

- Motivation, attitudes towards technology
- Knowledge about technology

Aspects of use areas and situations

- Resources
- Benefits of communication within a small network
- Critical/non-critical activities
- Complexity of tasks and work practices
- Organizational changes needed

Aspects of technology

- “Distance” between users and designers/vendors
- complexity
- costs
- flexibility
- “allied with the future”

Coordination and governance

- Structures and institutions have to be established (bootstrapped)
- “Standardization bodies”
  - Technology (protocols)
  - Work practices/procedures (protocols)

- (The Internet is an example to learn from in this respect as well)

Design strategy

- Start with
  - simple, cheap, flexible solution
  - small network of users that may benefit significantly from improved com. with each other only
  - simple practices
  - non-critical practices
  - motivated users
  - knowledgeable users

Bootstrapping design principles

1. Design initially for usefulness
2. Draw upon existing installed base
3. Expand installed base by persuasive tactics

Boostrapping algorithm

1. Repeat as long as possible: enrol more users
2. Find and implement more innovative use, go to 1
3. Use solution in more critical cases, go to 1
4. Use solution in more complex cases, go to 1
5. Improve the solution so new tasks can be supported

MyHealthRecord

Communikasjon between patients and health care insititutions

2002-2004

Phase I
Conceptual design

- 2002: Design of MyRec as component in the Clinical Portal.
- Clinical portal prioritise existing fragmentation of IS in the hospital, MyRec not further included .
- 2003: first Initial sketches as independent solution with focus on providing trusted information and access to document from hospital systems.
- 2004: first mockups with various suggested functionalities
- 2004: idea to design of secure messaging service to address the illegal use of email in patient-hospital communication

2005-2009

Phase II
Initial experiences

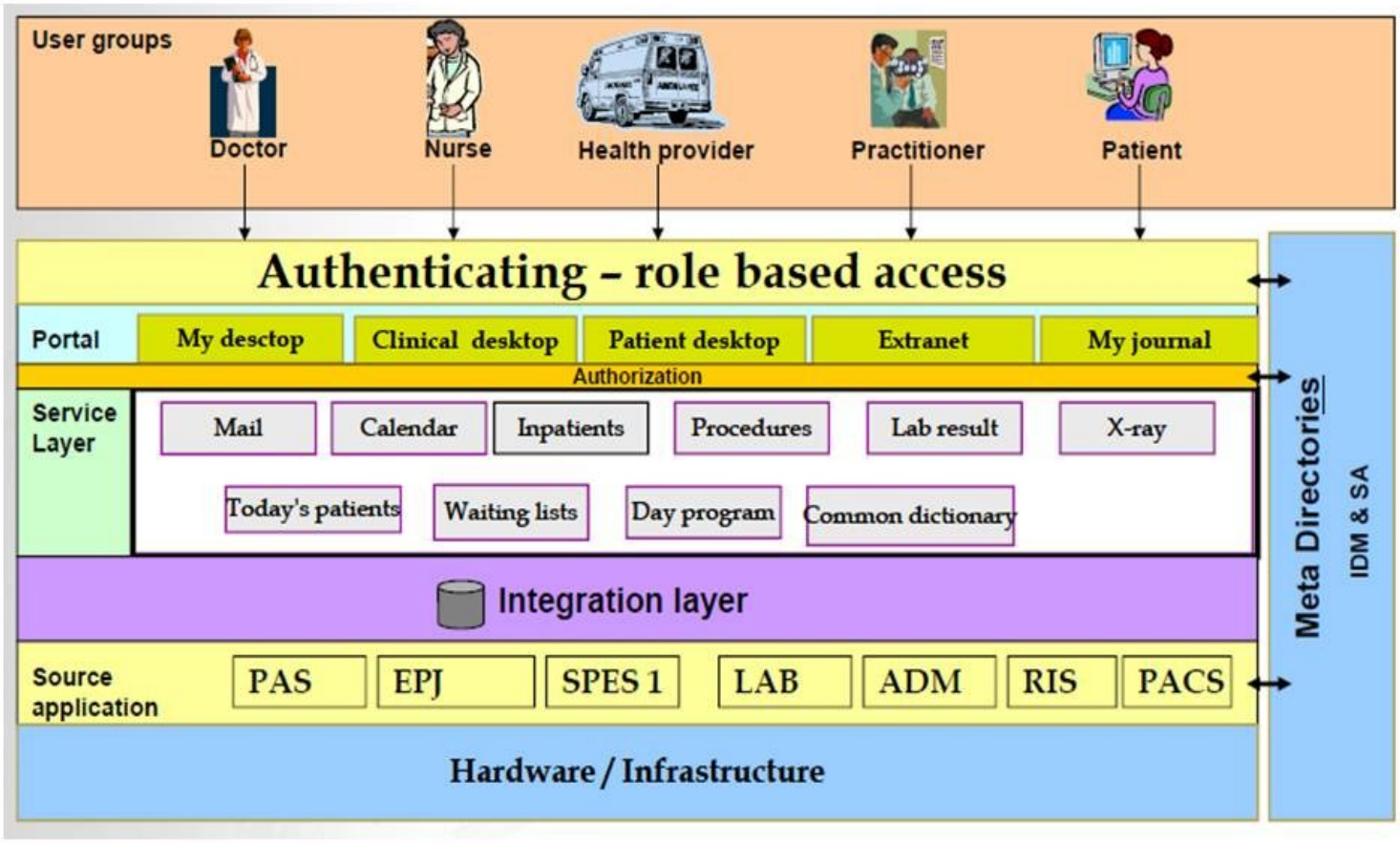
- 2005: Creation of unit for ”research and patient services” (MyRec), new unit manager, new member hired
- 2005: first functional version implemented
- 2005: secure messaging designed and implemented
- Design of Request-change of appoitments services and diversification in open/closed services
- Benefits
- Some functionalities dismissed
- 2008: change of security solution to a more user friendly one

2009-2012

Phase III
Consolidation

- MyRec is contacted by departments and patient organizations
- development of a number of modules addressing specific problems of hospital-patient communication and focus on solving concrete specific problems.
- development of a number of general modules.
- development of modules according to a generic logic for re-use.
- wider implementation of generic functionalites
- participation in EU project
- Other hospitals take MyRec into use

MyHealthRecord – 1st design



2nd version

- Stand-alone infrastructure
  - iKnowBase platform
  - A few basic services
    - Secure logon
    - Secure email
  - A few specialized services

3rd version

- Emergning
- Tools and services for diabetes patients
- ”plaform for disease management”

Evolution

- Innovations
  - Of: 3 versions
  - In: BankID as security system
  - On: specialized services, generification, a new layer emerging
- Architecture: 3 versions, ”experimental architecting”
- Process strategy: experimental development, early use (bootstrapping)
- Governance regime: small, independent team (”under the radar”)

Mobile payment systems

- Google Wallet, Apple Pay, ValYou, ..
- NFC technology
- Intergations: handsets, id/security, banks, shops, credit card companies, ..
- User adoption, ...
- New bank/finance institutions??
- Regulatory issues?