



User Centric Innovation

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About myself

- Associate Professor at VUC since 2002
- Academic background: Information Systems
- Research: Public Sector Innovation, e-Government, e-Participation
- Center for Innovation and Management
 - Multidisciplinary research team
- Citizen centricity, user centricity, customer centricity, through cc:eGov and NET-EUCEN

User Centricity



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User Centricity

- Isn't user centricity obvious?
- Do we not develop products and services to fit the needs and wants and limitations of the users?



NOT ALWAYS!



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Norwegian Flirt trains



Problem with seats

- In service production May 2012
- Customers/users started complaining immediately about the seats.
- Too narrow, impossible to work, not comfortable to sit.

Problem with seats

- December 2012: Initial decision to change the seats
- June 2013: Final decision to make changes with a budget
- Costs: More than 6 million Euro
- Seats are to be changed next spring (2014)
 - 8 months for delivery

Driving permit



Driving permit

- **Is a driving permit really necessary?**
- It is a document you need to produce for inspection, so you need to keep it with you.
- If not, you can get fined.



Driving permit

But:

- If you are stopped, they still check if your driving permit is valid (through radio or computer).
- So why have a driving permit, when you have other valid identity documents?



User centricity

- If users were involved in all stages of (product, process, service) development, the results could be better.
- This is the main topic of this keynote: How to do innovation in a user centric way.

User centricity

- User centricity is not obvious!
- How to achieve user centricity?
- Learning from the users
- Involve users in development of products and services

The Origins of User Centricity



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The Scandinavian model

- Scandinavian model of system development
- Long tradition of involving users in the development process

The Scandinavian model

- 1974 Viking-Askim (Norwegian Company): Agreement on implementation of Electronic Data Processing
- 1975 Agreement between the Confederation of Norwegian Enterprise (NAF, later NHO) and the Norwegian Confederation of Trade Unions
- 1975 Agreement between the Government and their employees.

The Scandinavian Model

- Worries about the impact of Electronic Data Processing (EDP) on
 - Loss of jobs
 - Lack of privacy
- But also
 - Empowerment
 - Use best practice

The Scandinavian Model

- Users were the employees, not the public.
- Unions played an important part

The Scandinavian model

Benefits of users involvement:

- Improving the knowledge upon which systems are built,
- Enabling people to develop realistic expectations, and reducing resistance to change, and
- Increasing workplace democracy by giving the members of an organization the right to participate in decisions that are likely to affect their work.

N. Bjørn-Andersen and N. Hedberg. Designing Information Systems in an Organizational Perspective, Studies in the Management Sciences Prescriptive Models of Organizations vol 5, 1977, pp. 125- 142

New Public Management

- UK, New Zealand, Australia, Scandinavia.
- Basic idea: Use principles from private sector in public sector.
 - Autonomous units. Competition.
 - Professional management (more space for managers).
 - Indirect control (goals, results, measurements, reports).
 - **User/customer focus.**

New Public Management

- User/customer focus includes such ideas as:
- Treat public service users as customers
- Let users choose for themselves
- User satisfaction measurements

For more discussion of NPM as a driver for user centric innovation, see L. L. Langergaard. Understandings of “users” and “innovation” in a public sector context. In J. Sundbo and M. Toivonen (eds). User-based innovation in Services. 2012. Edward Elgar Publishing, Celtenham, pp. 203-226

She also discusses “Network governance” as a new paradigm, which is even more important for innovation.

European Union

- The European Union put focus on Citizen Centric services during the UK Presidency in 2005.
- Ministerial Conference in Manchester, UK: “During 2006 and 2007, Member States will, through the European Public Administration Network, exchange experiences in developing policies which are inclusive by design, for example, in citizen-centric service delivery or the use of multi-channel architectures”
- Several projects initiated:
 - cc:eGov
 - OneStopGov
 - NET-EUCEN

Lean Startup Methodology

- Eric Ries
- Startups as a learning process
- Based on Lean methodology
- Experiment and validate



Innovation



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Innovation

- New products
- New services
- New processes
- BUT new is not enough
- Value creation

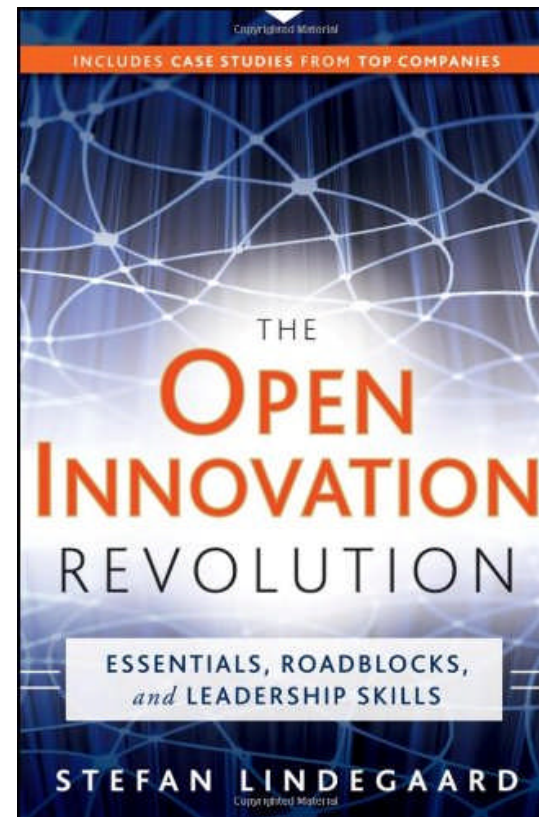
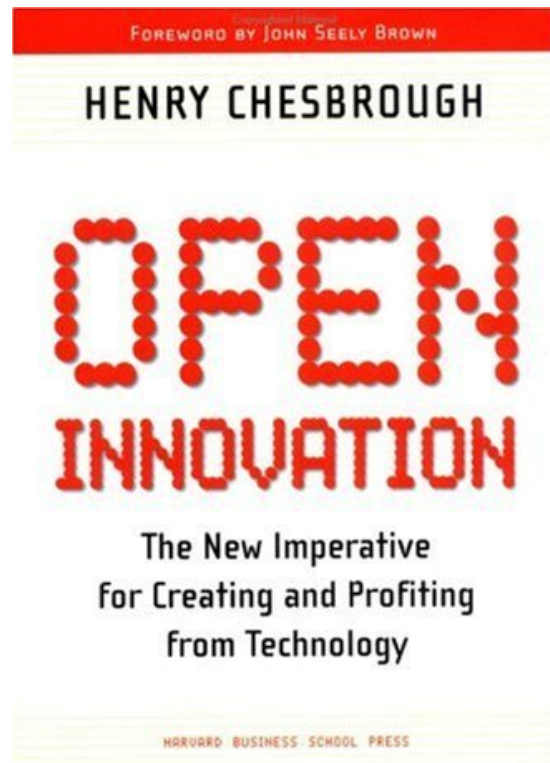
The purpose of innovation

- Better products, services, processes
- What is better?
 - Efficiency
 - Quality
 - Improved functionality
 - Ease of use

Innovation

- Dimensions
 - Closed Innovation
 - Open Innovation
 - Working with external partners
 - But also with users
 - Buy intellectual property
 - Sell intellectual property

Open Innovation



Innovation

- Radical or disruptive innovation
 - Changes the rules in a market
- Incremental innovation
 - Stepwise refinements

Good examples

- Airline industry / tourism
- Music
- Retailing

User Innovation (UI)

- When user invent by themselves
- Examples of areas (see reference below):
 - Scientific Instruments and Machine Tools
 - Medical Instruments
 - Outdoor Sports Consumer Products
 - ICT`s and Digital Products and Tools

Georgina Voss. The Historical Construction of User Innovation. In: Stephen Flowers and Flis Henwood. Perspectives on User Innovation. Imperial College Press, 2010

- Users that know how to program

User Innovation (UI)

- Modifying existing products
- Making new products and services
- Software: Lotus Notes, report generators
- Music: Take control over the value chain



User Centric Innovation



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User Centric Innovation

- User innovation is not user centric innovation
- User centric innovation is when users are involved in the innovation process, preferably in all stages of the service/product lifecycle.

User Centric Innovation

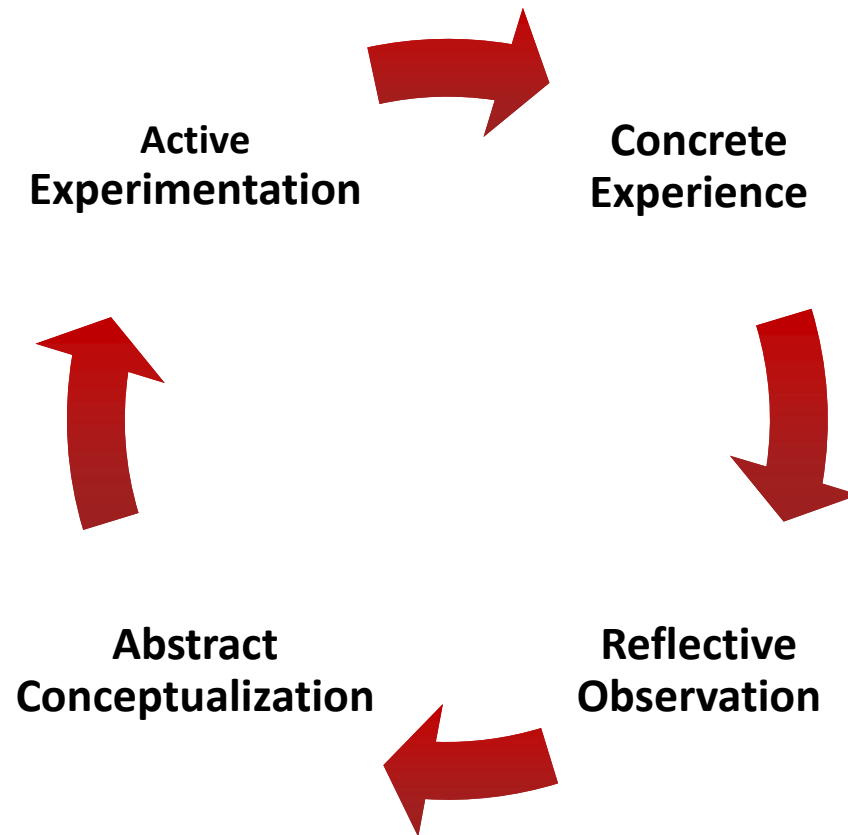
- Systematic collection of user input
- Collaboration, participation
- Users may be co-creators of the service
- Adding their wishes and expectations
- But also their competence

➤ Mindset

Lean Startup

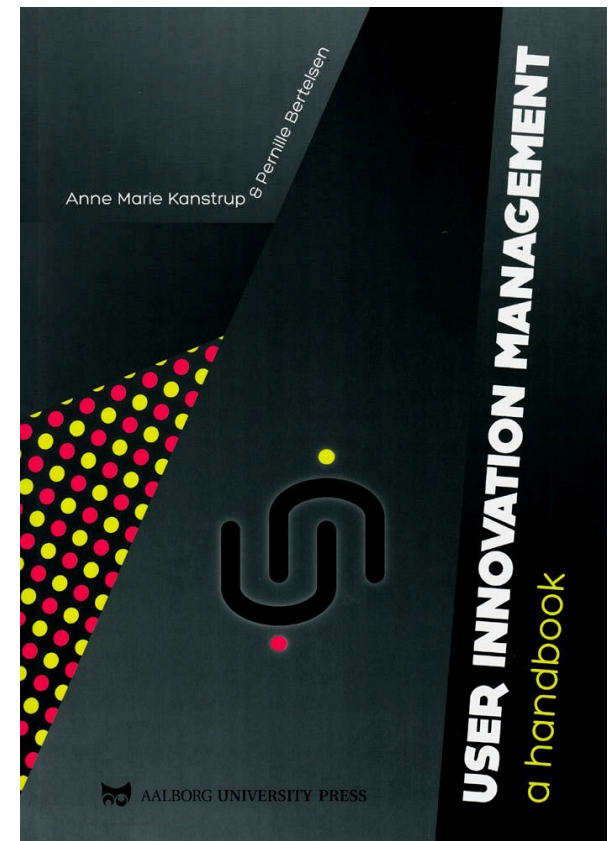
- Key point: Validated learning
- Startups exist to learn how to build a sustainable business
- Scientifically validated learning through frequent experiments where vision is tested
 - Minimum viable product
- Build-Measure-Learn (feedback loop)

Kolbs Learning Cycle



User Innovation Management (UIM)

A.M. Kanstrup & P. Bertelsen
Aalborg University, Denmark

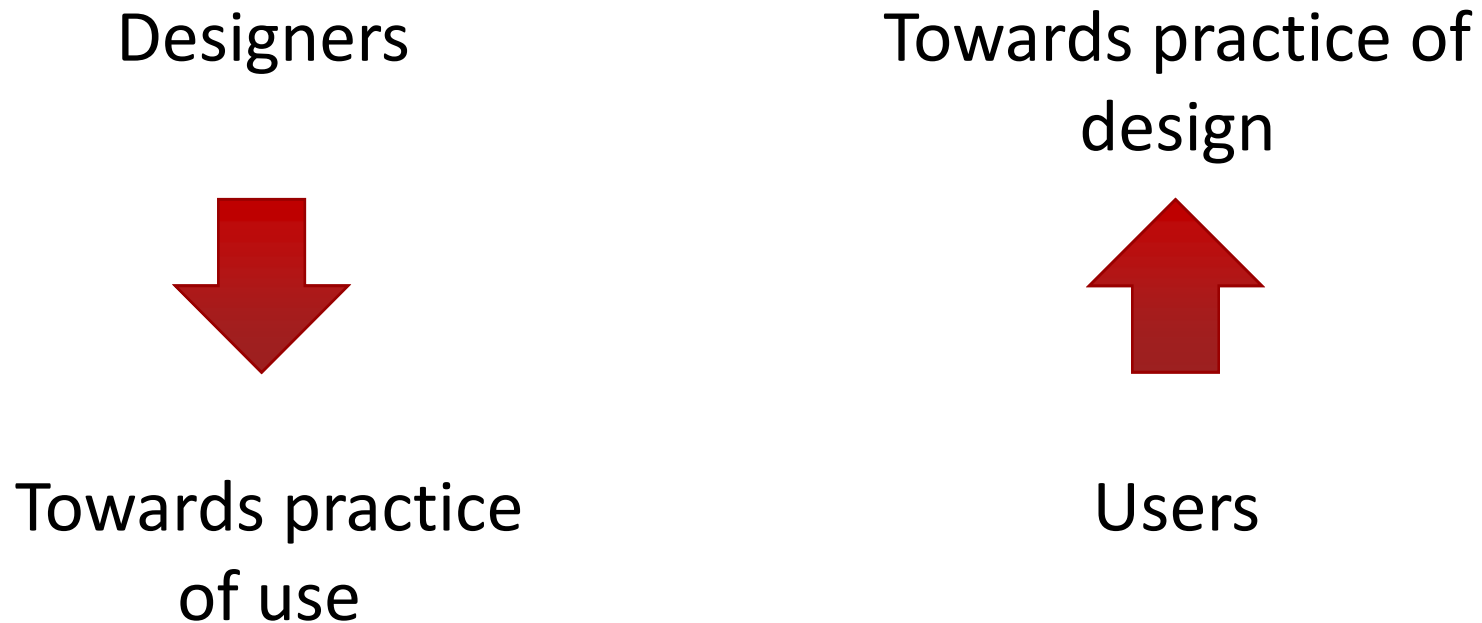


User Innovation Management (UIM)

- Involve users early and throughout the design processes (in contrast to being testers of designers' ideas at the ends of the design processes).
- Create space for users to point out directions for designs (in contrast to walking on a path already cleared by designers)
- Manage users innovation process (in contrast to manage own innovation process)

User Innovation Management (UIM)

Innovation as a learning process



NET-EUCEN

- EU funded thematic network with focus on user-driven services
- Actively involve users in service design and delivery
- Draw on expertise, views and perspectives of service users to complement the skills and input of service professionals
- User-driven services go beyond typical user consultation or user representation.
- Public service staff and users working together to determine what services to provide, and how.

NET-EUCEN

- NET-EUCEN definition of user centric: Fulfillment of three stages of user involvement:
- (1) User involvement in the design stage. The users are involved in development of ideas and concepts. Focus is on needs and requirements of the users, not technological constraints.

NET-EUCEN

- (2) User involvement in the development and implementation stages. Users are engaged in the initial implementation of the service in order to evaluate its features. Mock-ups and prototypes are used to continuously check that the service is aligned with user wishes and requirements. The aim of the user involvement is to improve the service and to optimize the outcome of the development and implementation.

NET-EUCEN

- (3) User involvement in the deployment and running stages. Users validate the service through testing of flexibility and interoperability. Test results are used to improve and customize service according to changes in political, economic or social environment.

NET-EUCEN

- Indicators to measure user involvement in the lifecycle of a service
- Three stages
- Indicators for each stage

User Centric Innovation

- User involvement in all phases of development
- User involvement should be sufficient, not superficial
- Who are the users?
 - Policy level (user organizations speaks for all)
 - System level (some users speak for the rest)
 - Selection
 - Lead users (see note)
 - Individual level (the user speak for him/herself)
 - Customization

Case: Welfare Technology



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Care

In Norway, municipalities are responsible for care.

Care is provided at appropriate level;

- Patient lives at home, visits doctor when needed
 - Personal home care
 - Residential care centres
 - Nursing homes (24x7)



New challenges for the municipalities

- Citizens live longer
 - More complex medical conditions
- Shortage of manpower
 - Problems of recruitment
- High expectations of the welfare society to provide professional care
- Increased costs

Welfare technology

- Citizens prefer to stay at home if they feel safe
- Welfare technology examples
 - Sensors
 - Devices
 - Alarms

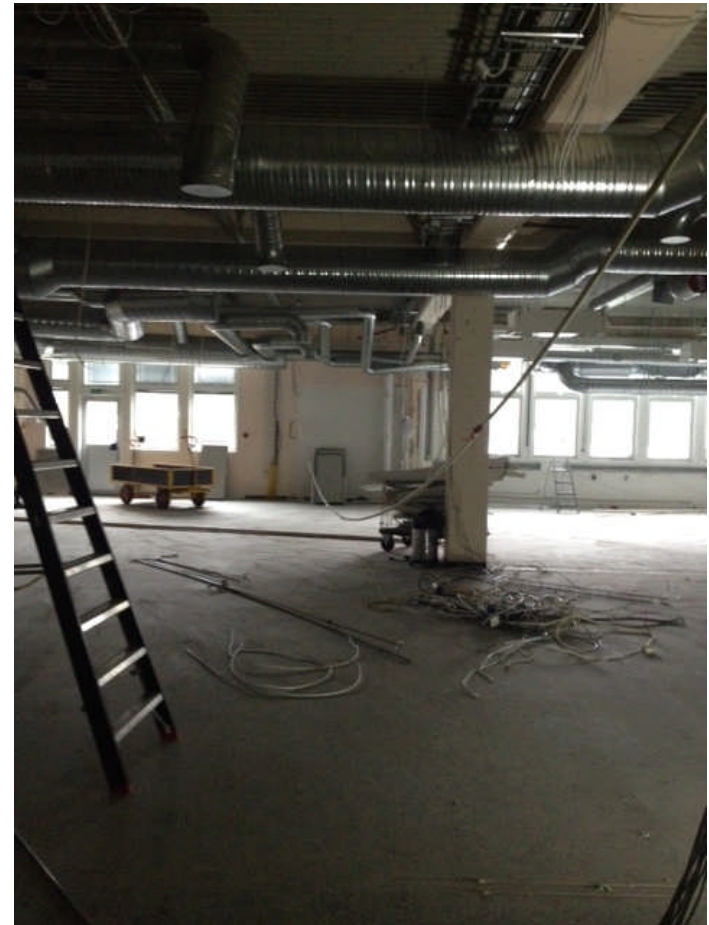
Experiences so far

- Technology is immature
- Many developments, but also many failures
- Often focus on technology

- We need user validation in real world settings
- As a university, we will contribute to this

Users and innovation

- Vestfold University College is establishing an Innovatory. This is some kind of a laboratory, an arena where stakeholder can meet and innovate.
- Opens March 2014



Users and innovation

- First phase: Focus on welfare technology
- Vendors and manufacturers
- Users
 - Employees (and students)
 - End users (and relatives)

METHODOLOGY



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Methodology

- Use risk planning, risk based approach
- Observe real users in real situations in a real environment
- Validate all phases with real users
- Make systems to receive user feedback.

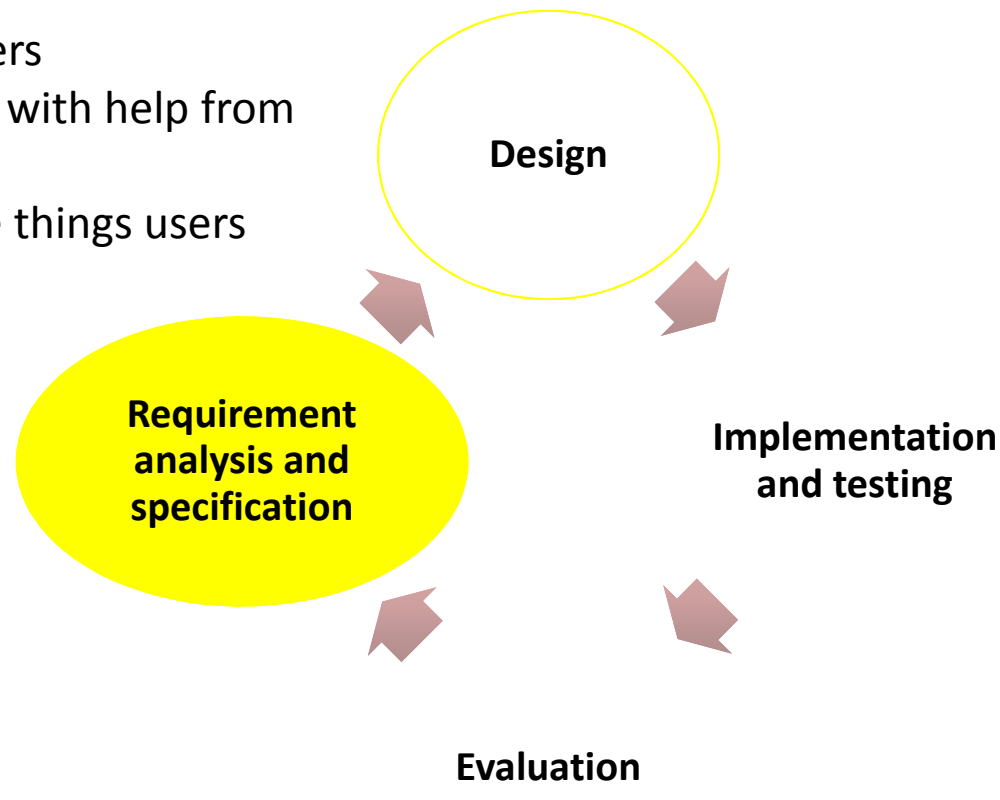
A risk based approach

- List all risks (unprioritized, brainstorming)
- Assign weights to each risk factor
- Assign probability to each risk factor
- Multiply weight with probability
- Use these numbers to prioritize

User involvement

Requirement analysis and specification

- 1) Identify the users
- 2) Build scenarios with help from the users
- 3) Use cases – the things users will do..

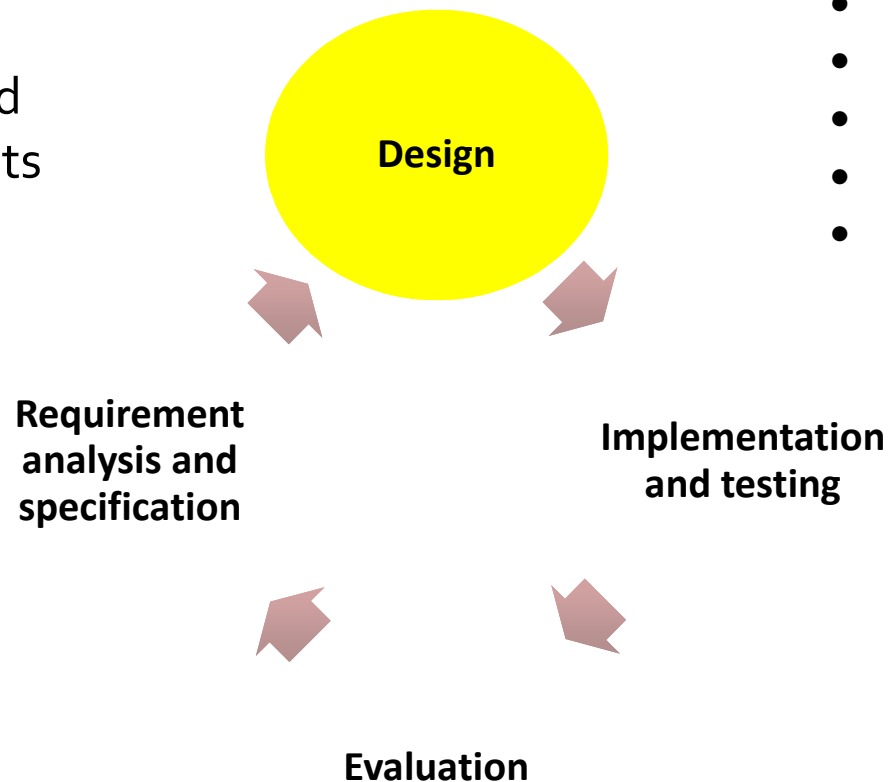


- Interviews
- Focus groups
- Observation
- Mock-ups

User involvement

Design

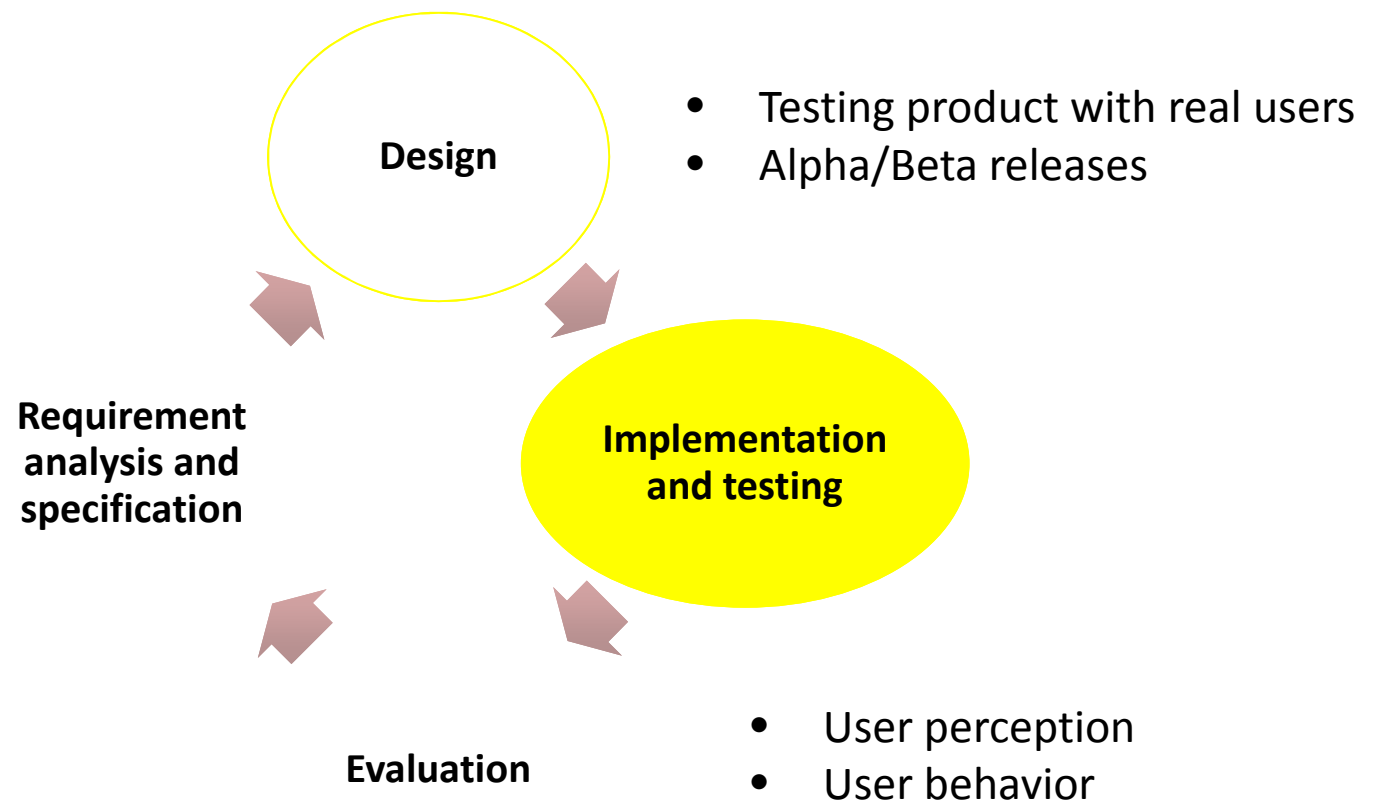
Users are consulted on all design aspects



- Mock-ups
- Prototypes
- “Proof of concept”
- *Usability testing*
- *Accessibility testing*

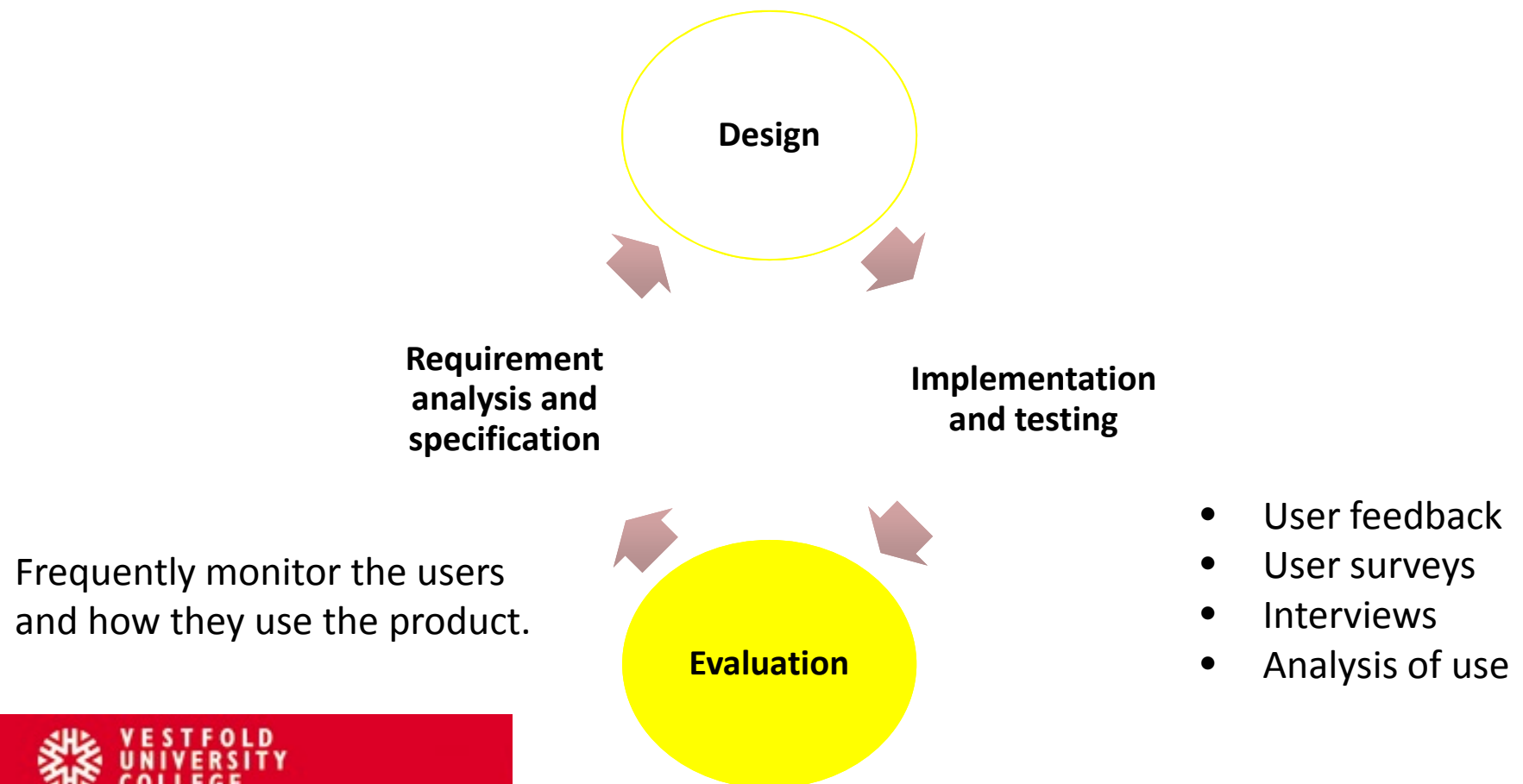
User involvement

Implementation and testing



User involvement

Evaluation



Techniques

For a discussion of more techniques used to involve users, see

K.L. Jansen and B. Dankbaar. Proactive Involvement of Consumers in Innovation: Selecting Appropriate Techniques

In: Stephen Flowers and Flis Henwood. Perspectives on User Innovation

Imperial College Press, 2010

Conclusion

- User centricity is about a **mindset**.
- **The needs, wants and limitations of users must be recognized**
- **Users must be part of all stages of development processes**

More information?

- cc:eGov (EU-funded project) produced a series of “Think Papers” in order to raise awareness about citizen centricity.
- You can find these on <http://www.citizencentric.net>
- NET-EUCEN website: <http://www.net-eucen.org>



Thank you for listening!