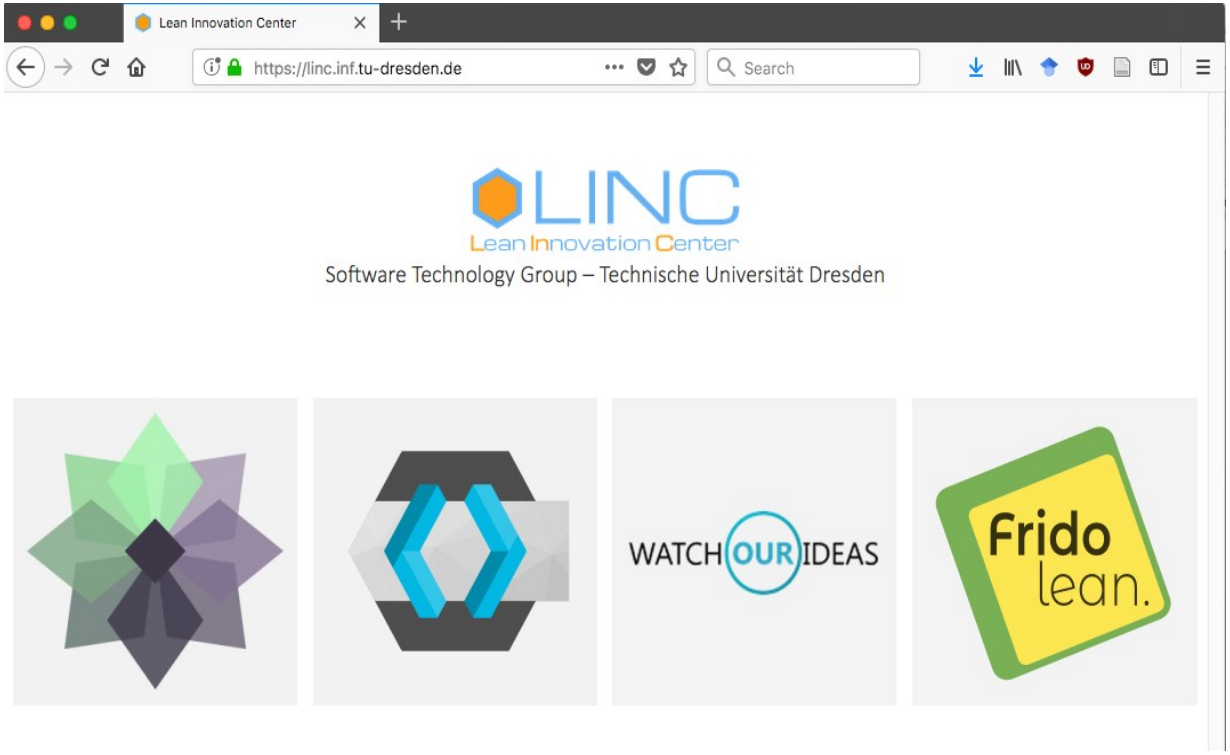
20. Lean Innovation Workflows with LINC

Prof. Dr. Uwe Aßmann
Softwaretechnologie
Fakultät Informatik
Technische Universität Dresden
2019-0.1 11/23/19
http://st.inf.tu-dresden.de/teaching/saab

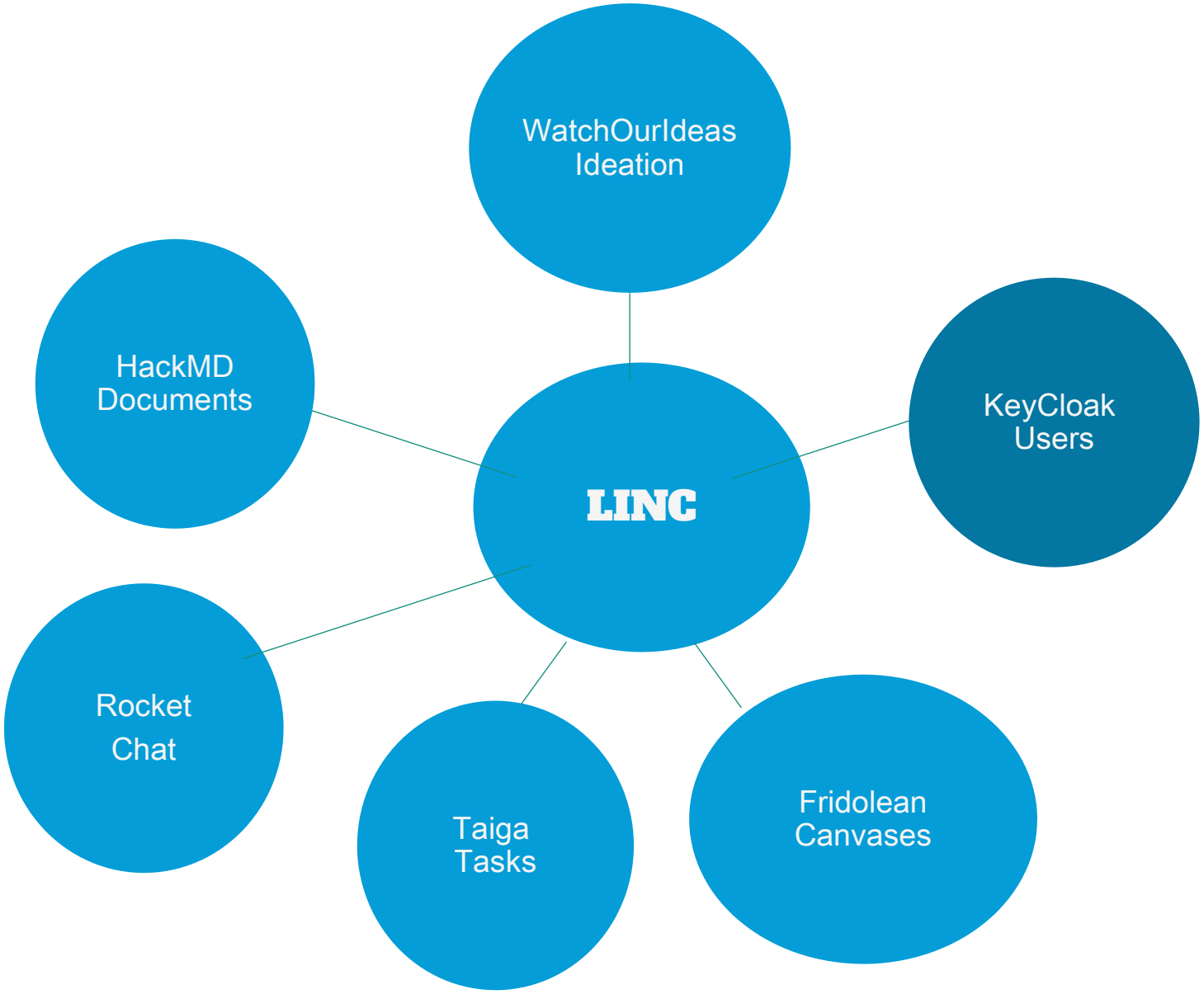
1) What is „Lean Innovation”?
2) LINC
3) Innovations with Cube-Its

Lean Innovation Management Center

- Public instance available at http://linc.inf.tu-dresden.de
- Course instance available at http://linc.saab18.inf.tu-dresden.de
- Made in the ECSEL IoSense project www.iosense.eu
- Innovation Process CLIP for in-house products, but based on Lean Startup
  - Template-based ad-hoc workflows
  - Synchronization of data

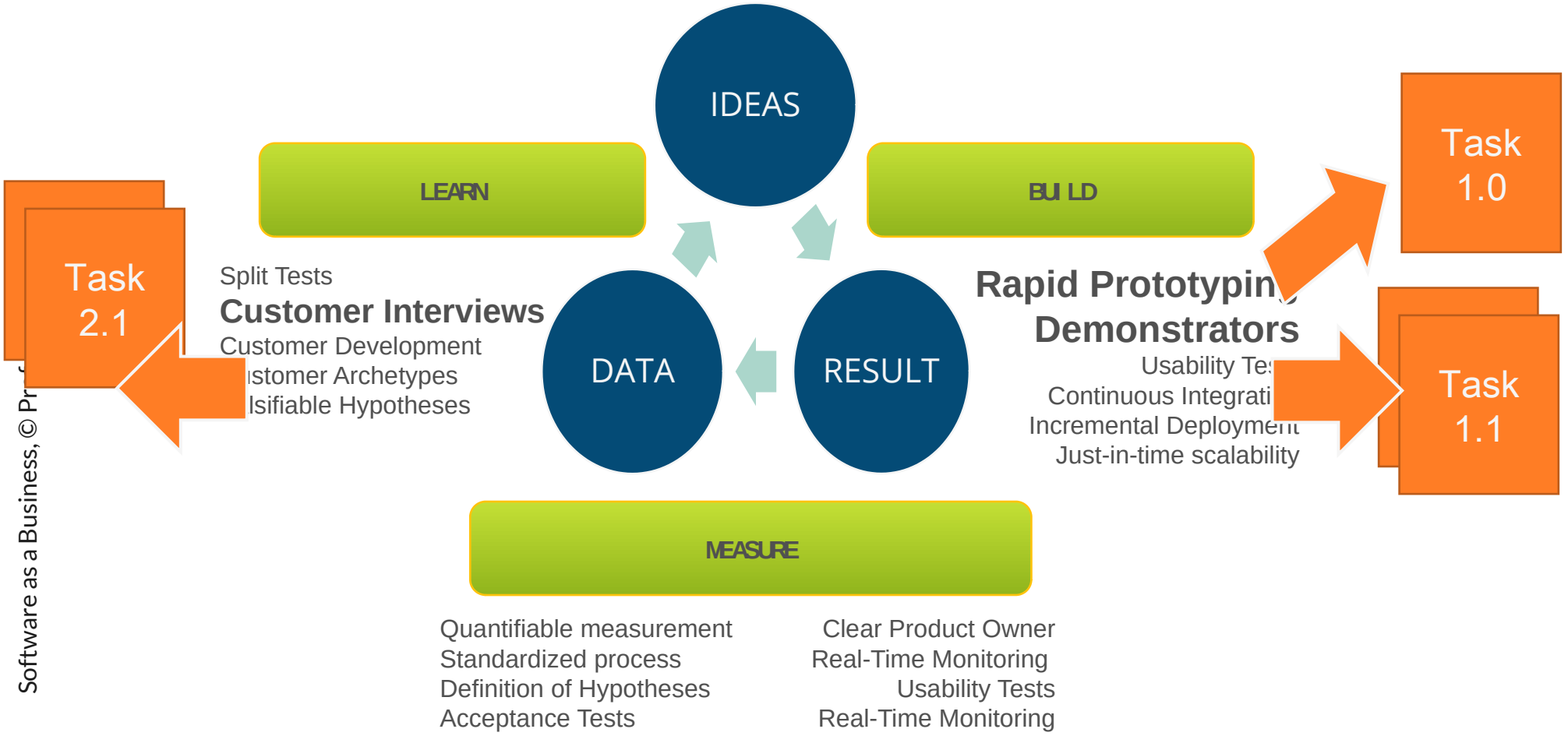


LINC Structure



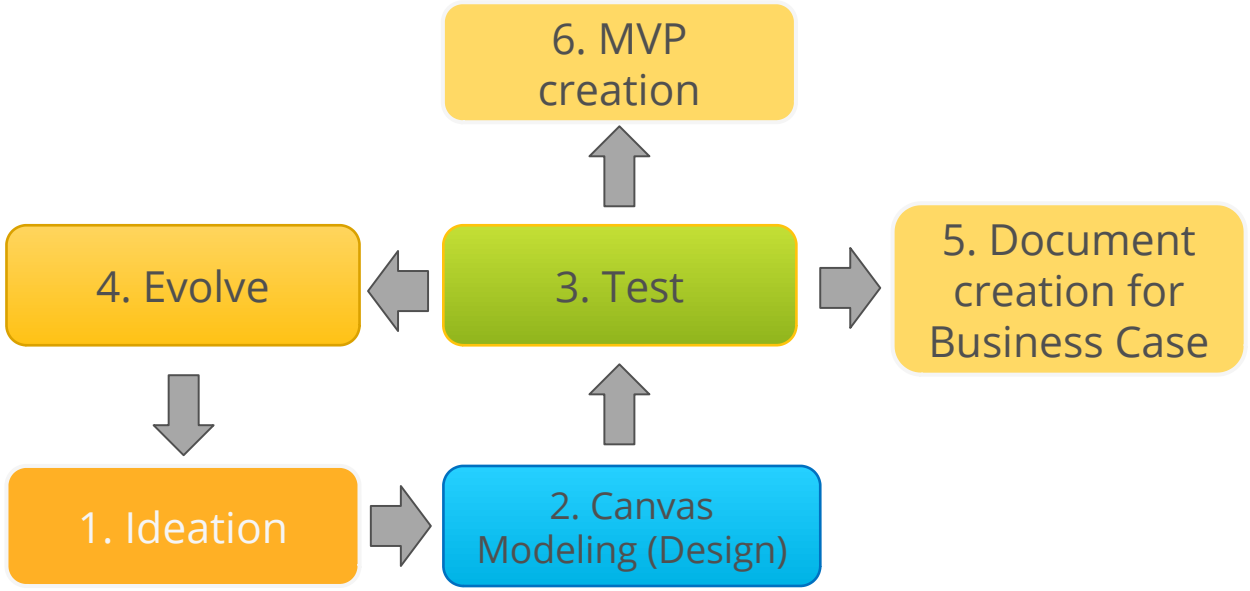
Hypothesis Testing in „Lean Startup“ Process

Lean Startup Cycle:



CLIP is “Lean Startup” for Co-Innovations with Customers

- CLIP Phases (Customer-centric Lean Innovation Process)
  - 1. Ideation with WatchOurIdeas – Idea management platform
  - 2. Canvas modeling with Fridolean platform
  - 3. Hypothesis testing With stakeholders on RocketChat
    - Lessens Learned List on codiMD
  - 4. Evolve: Iteration / Refine
  - 5. Document creation with codiMD
  - 6. MVP creation



CLIP Innovation Workflows - Starting from Zero

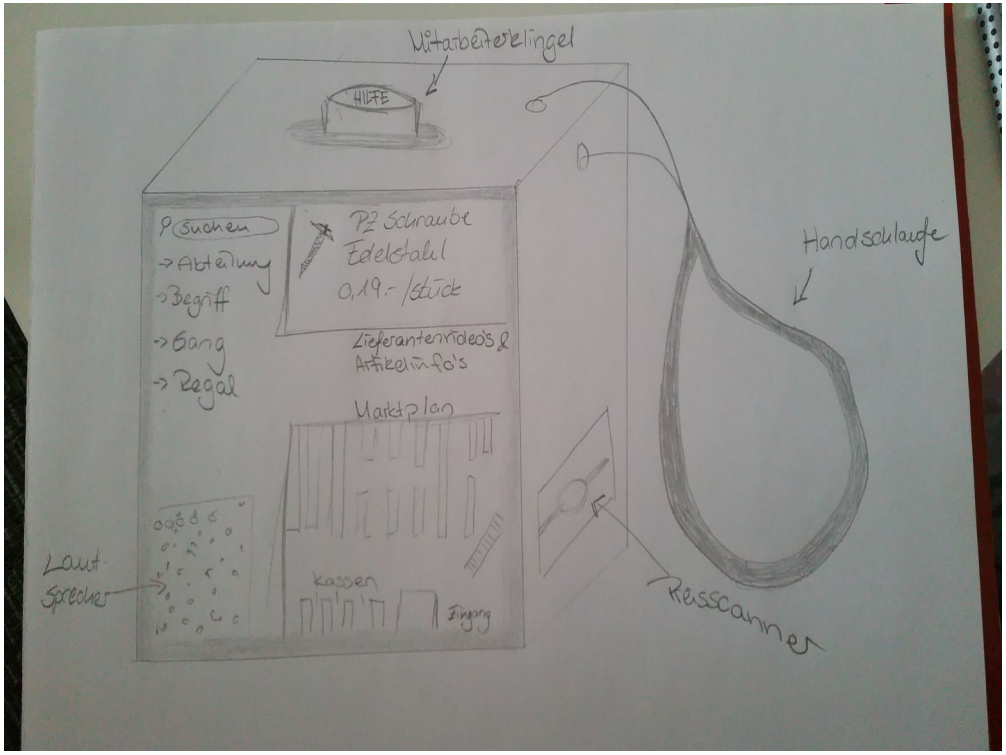
- Problem (on WOI or Problem Diary) → LeanCanvas → Idea → VPC → SPIN Canvas (with Customer on RocketChat)
- Idea (on WOI) → VPC → NABC
- Customer Analysis
  - Customer Day Canvas → Customer Jobs (in VPC) → Problem or Pain
- Customer Validation
  - Fill a VPC with the customer in a Rocket chat
  - Do a SPIN session with the customer in a chat

CLIP Innovation Workflows – for Cube-It

- Customer Analysis for **Patient in Hospital**
  - Customer Day Canvas → Customer Jobs (VPC) → Problem or Pain
  - Customer Feel Canvas → Problem
- Problem (on WOI or Problem Diary) → LeanCanvas → Idea → VPC → SPIN Canvas (with Customer)
  - Of **Patient in Hospital**

Navigation Cube-It [Lisa Schönbach]

- https://woi.inf.tu-dresden.de/ideadetail/wegweiser-togo
- Use Cube-It as Road Sign in a supermarket
- Navigation of Customers
- Information on Products



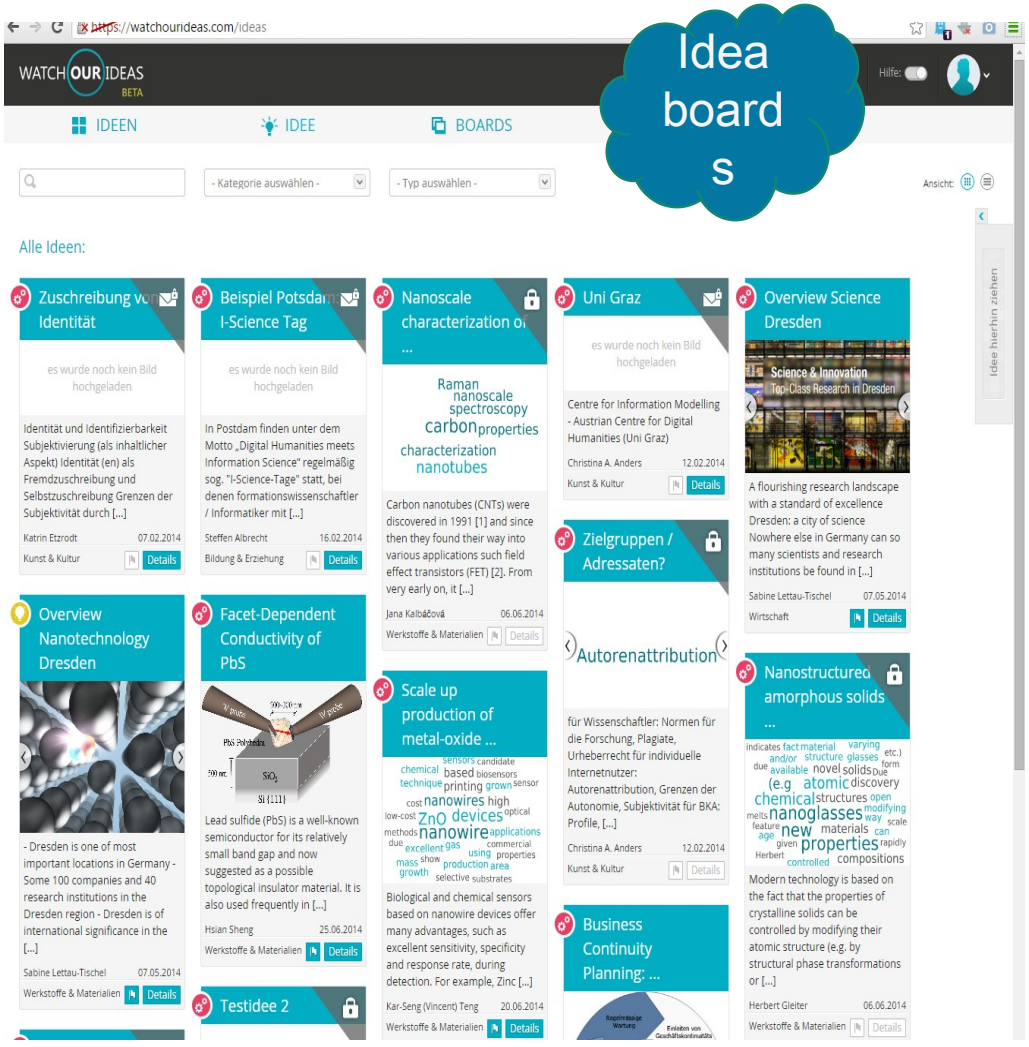
Cube-It for Robot Control

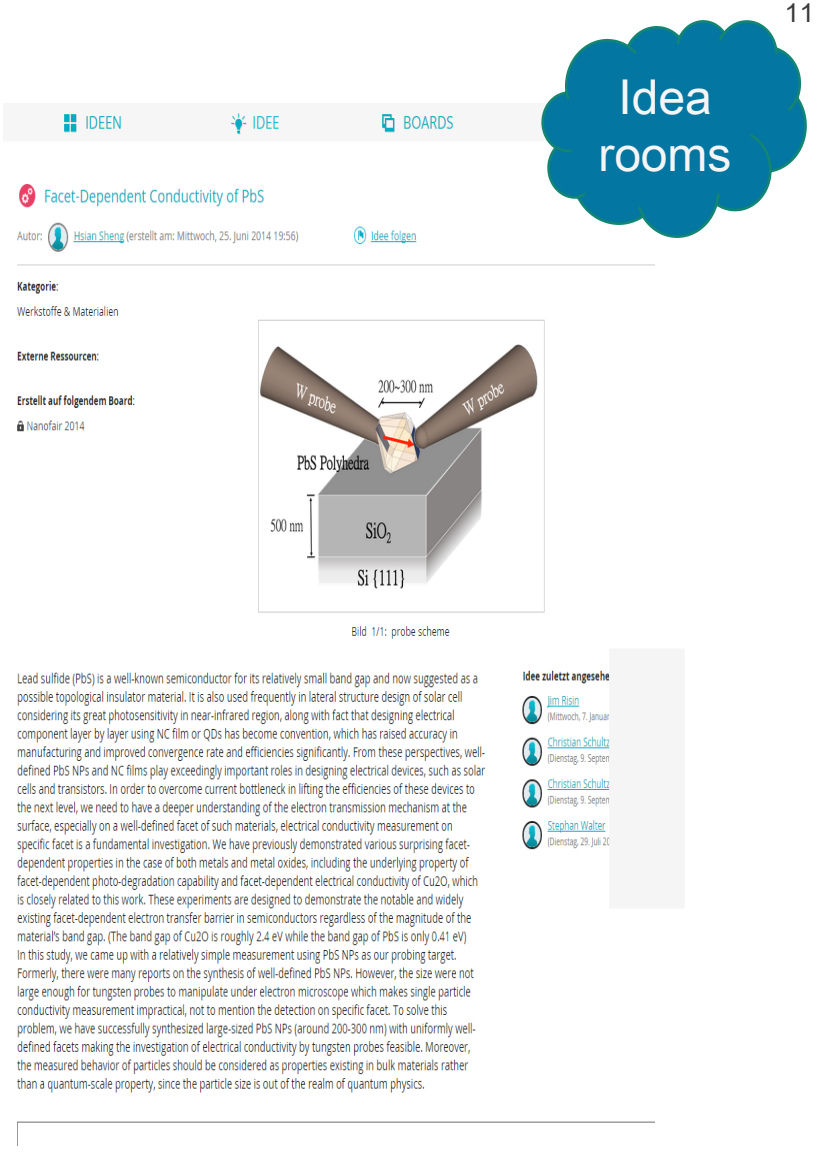
- Utilizing a Cube-It to control a robotic arm
  - Gyroscopic sensor translates into movement
  - Integrated into the IoSense Sensor Tool-Kit (STK)

CLIP Innovation Workflows: Starting from a Stable Canvas

- Scaling
  - Product BMC → Customer Segment variation → BMC of product line
  - Product BMC → Platform Canvas → BMC of Platform
- Stickifying and Viralizing
  - Lean Canvas → Pain Level Canvas → Grandma Postcard

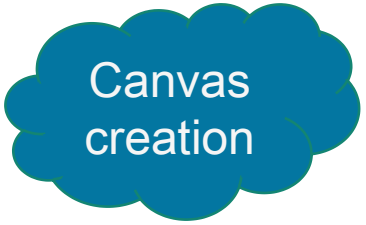
Ideation with LINC Component WatchOurIdeas – Web Idea Management Platform





WatchOurIdeas – Web Idea Management Platform

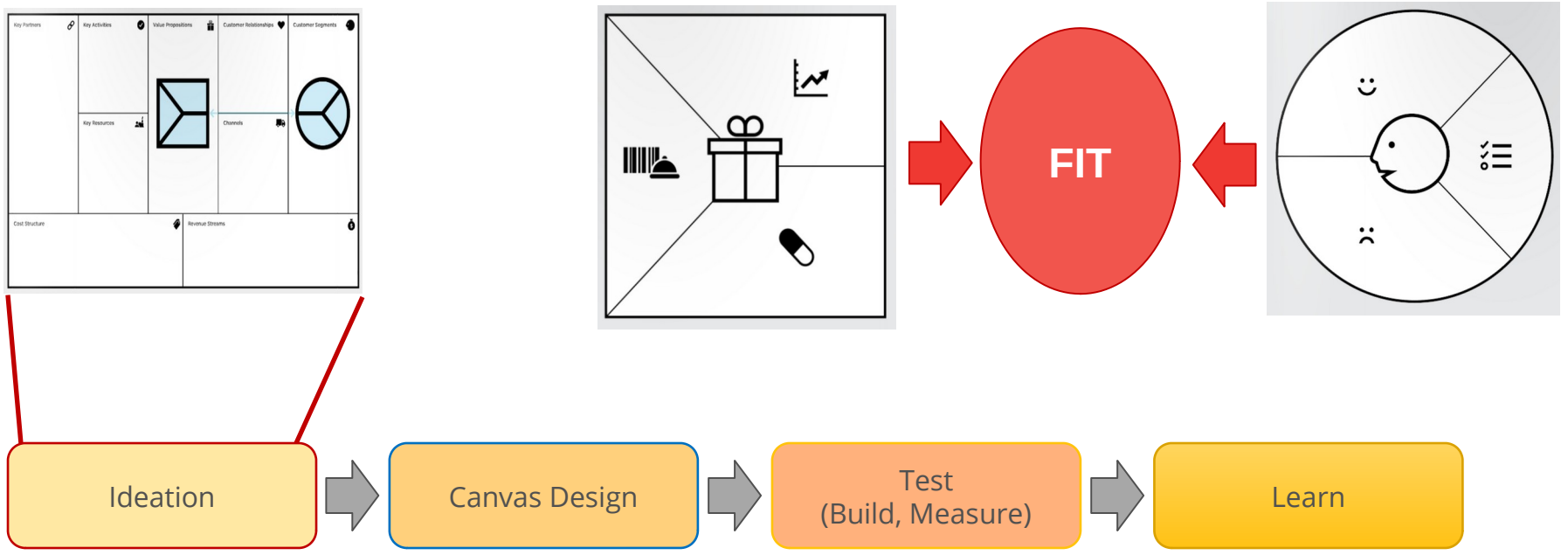
- Platform for communicating developing, sharing and combining ideas
  - Developed by TU Dresden, can be used within the course
  - Otherwise licensing required from TU Dresden
- Sharing ideas in idea rooms grouped by idea boards
  - Public, group-private, or private
- Gathering feedback, suggestions and improvement for ideas
  - Remote customer interviews
- Create canvases for developing ideas to business
  - Going over to Fridolean, the Canvas management tool



Canvas Modeling with LINC (component “Fridolean”)

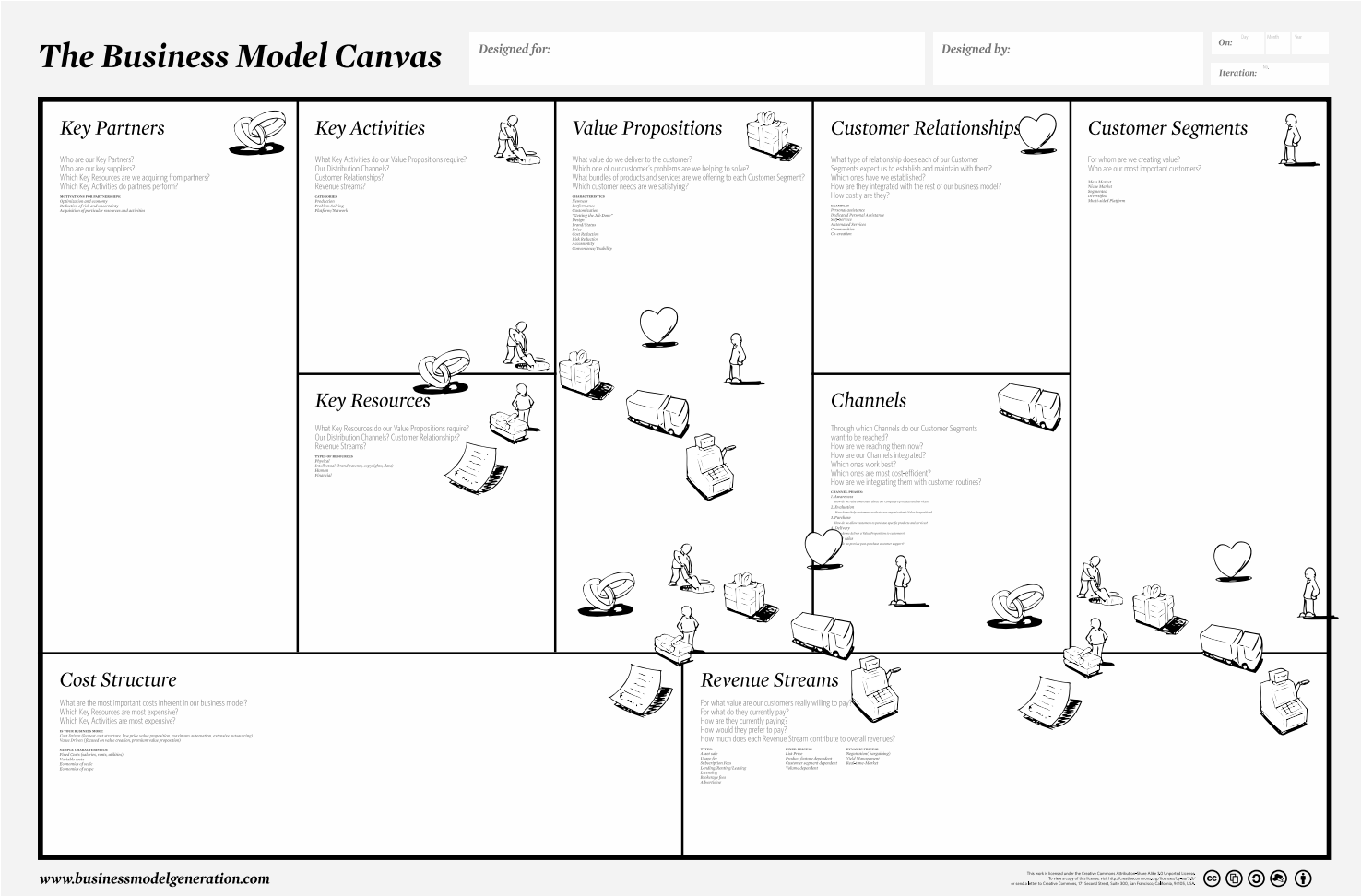
https://blog.strategyzer.com/posts/2014/9/29/value-proposition-design

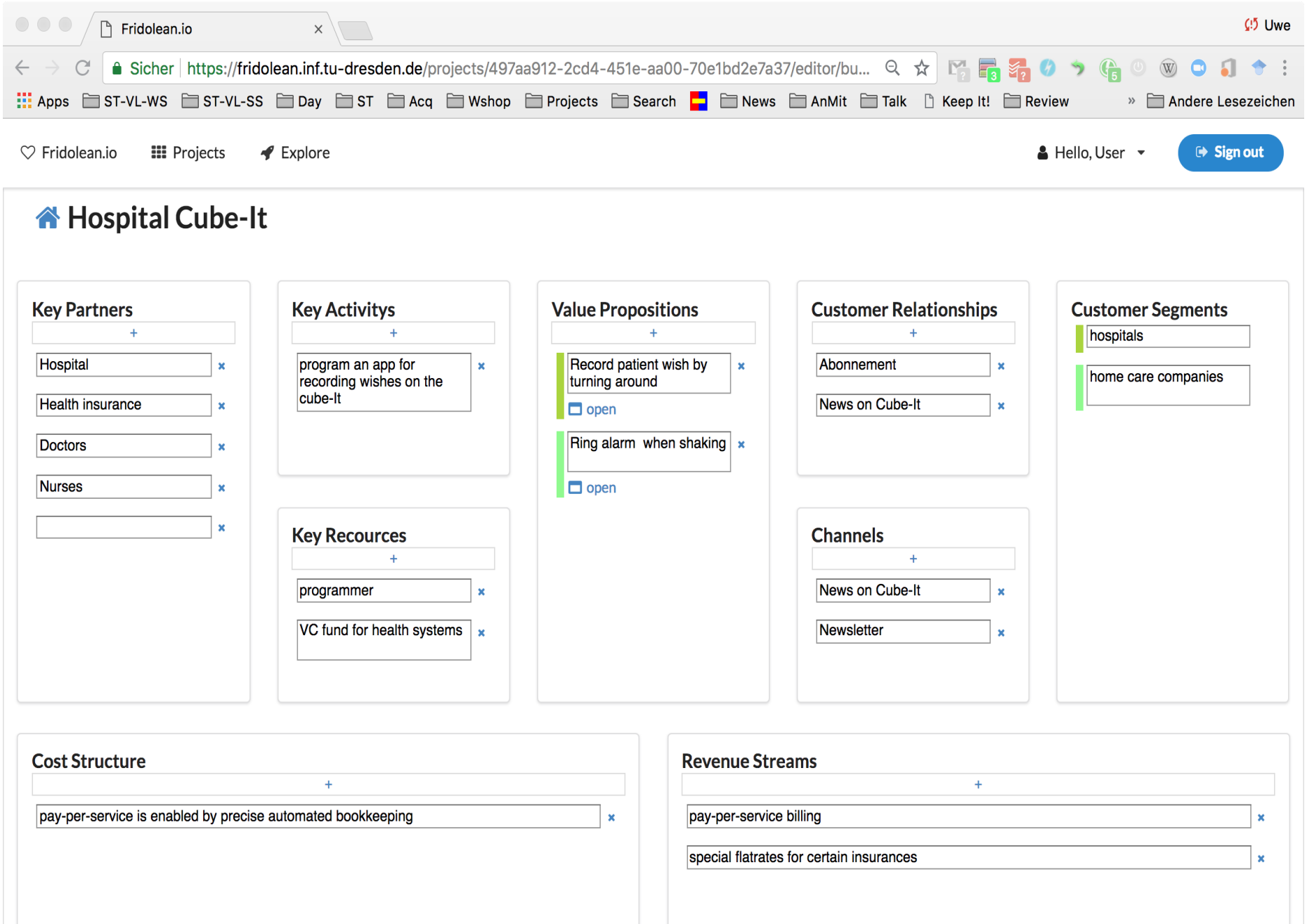
Osterwalder, Pigneur; Value Proposition Design, 2014



Web-Based Development of Business Model Canvas with LINC (Component „Fridolean“)

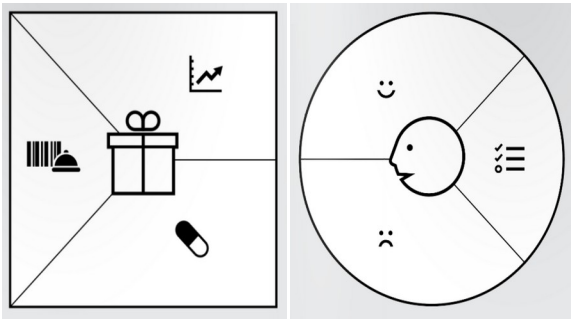
- From book “Business Model Generation” [Osterwalder/Pigneur]
  - Developing new or capturing existing business models
  - Different aspects of business model generation
- Fridolean: Online Canvas Editor, developed at TU-Dresden
  - Nested canvases
  - Life editing while chatting with Rocket Chat

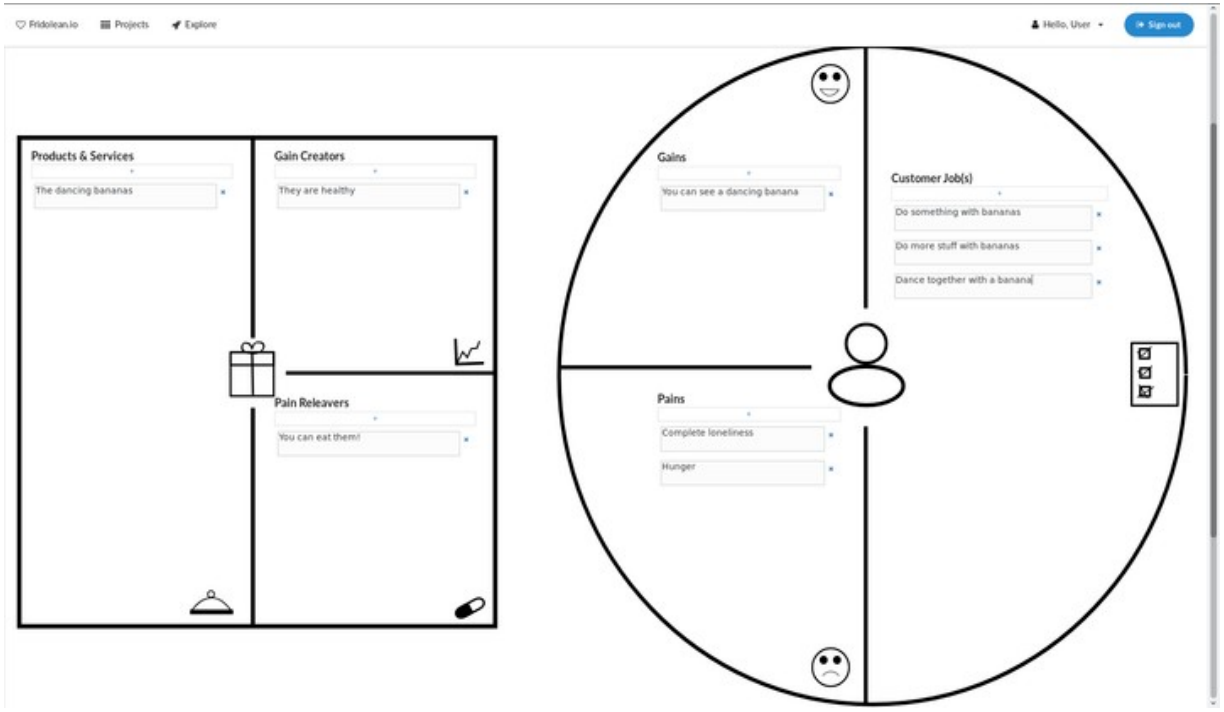


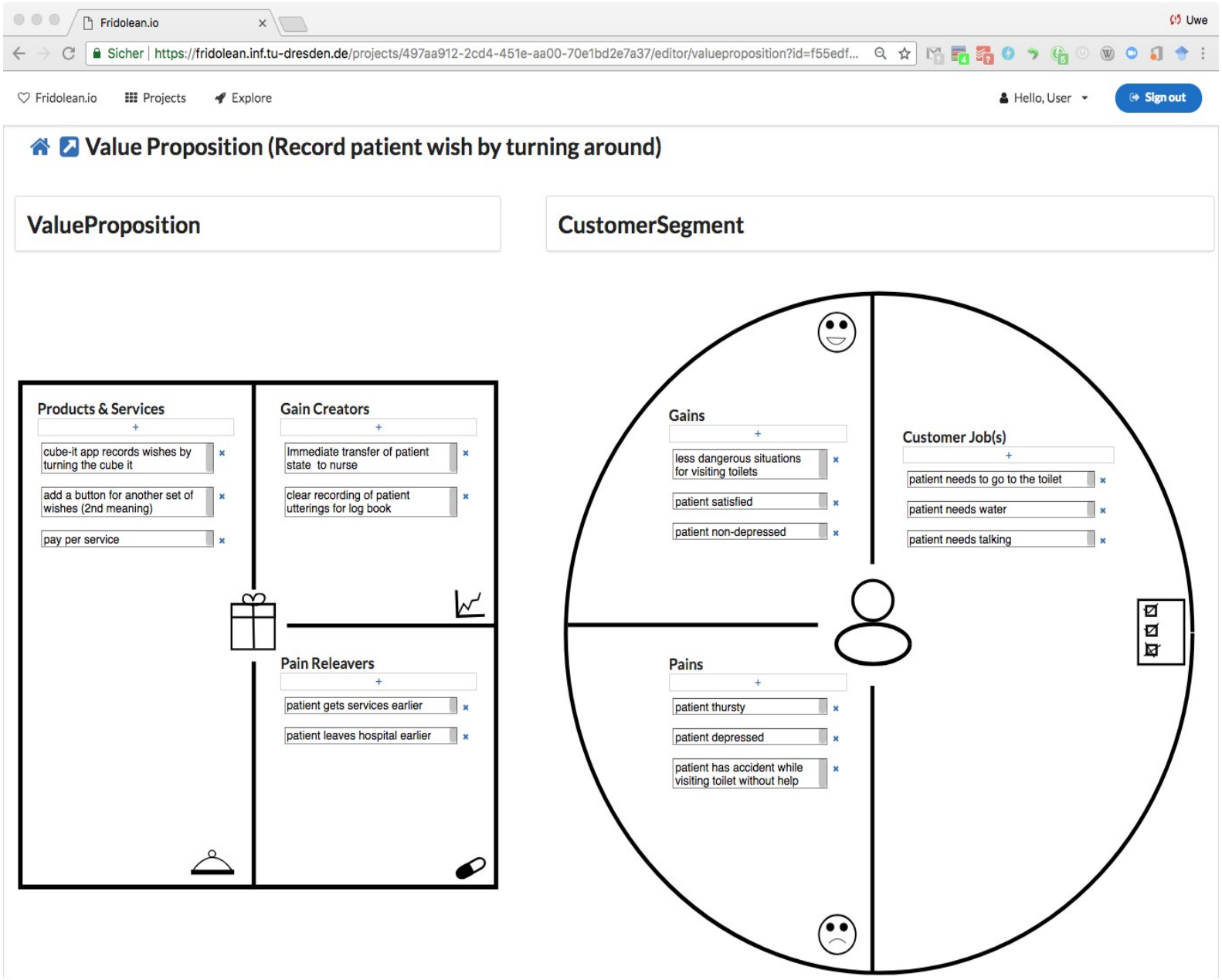


Example: Web-Based Validation of Business Model Canvas with LINC (Component „Fridolean“)

- Value Proposition Canvas
  - Finding Pains and Gains

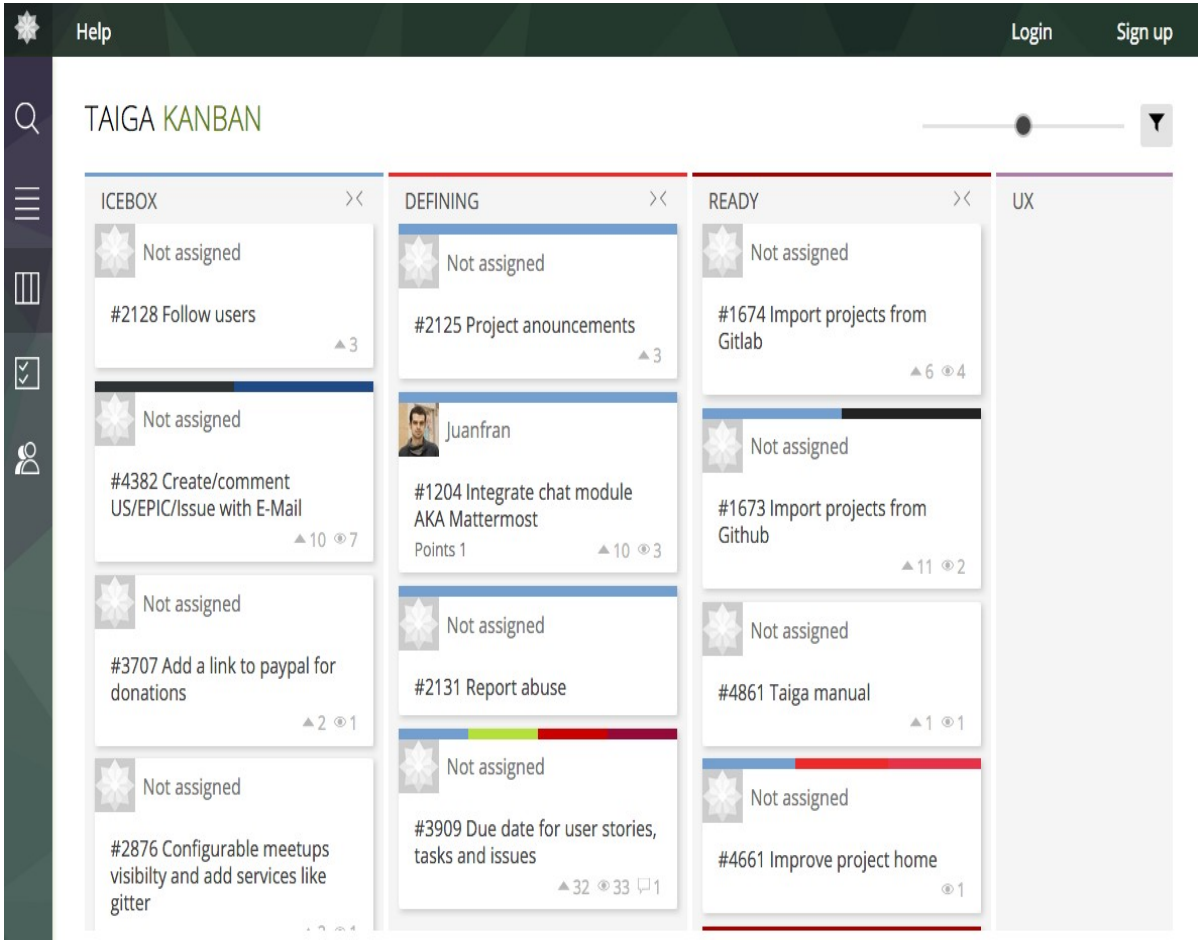




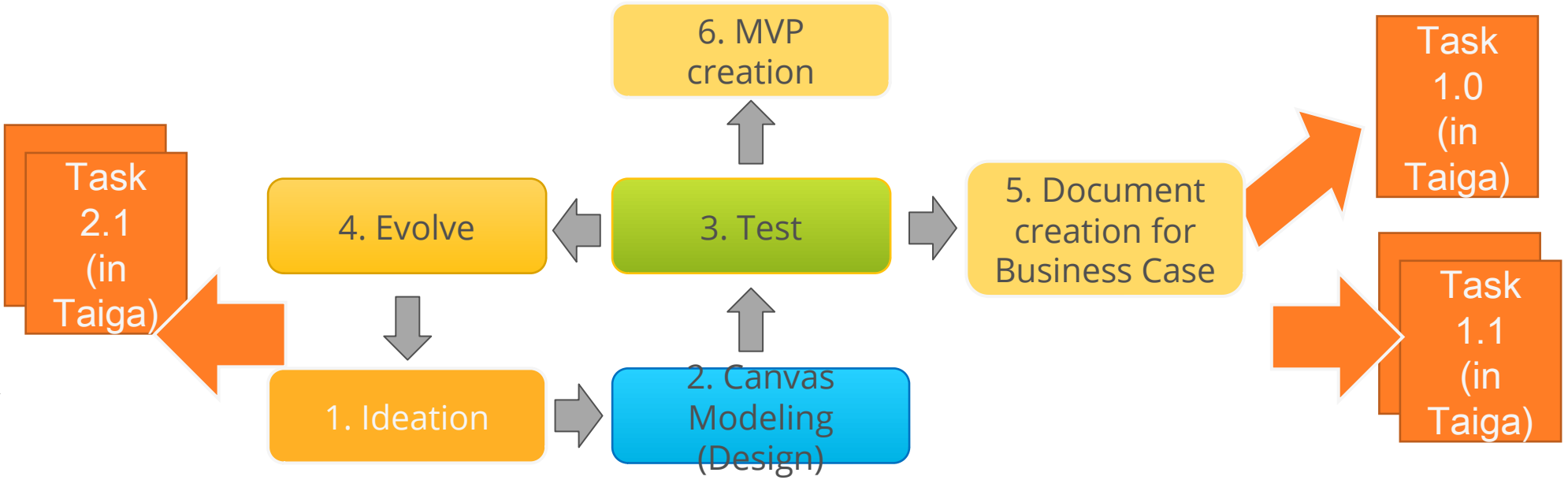


Task Management (Iterations) with LINC Component „Taiga Kanban Board“

- Taiga Task Management: Similar to
  - Wekan, Jira, Trello, Eteo-Board
- User identity management with KeyCloak (OSS)

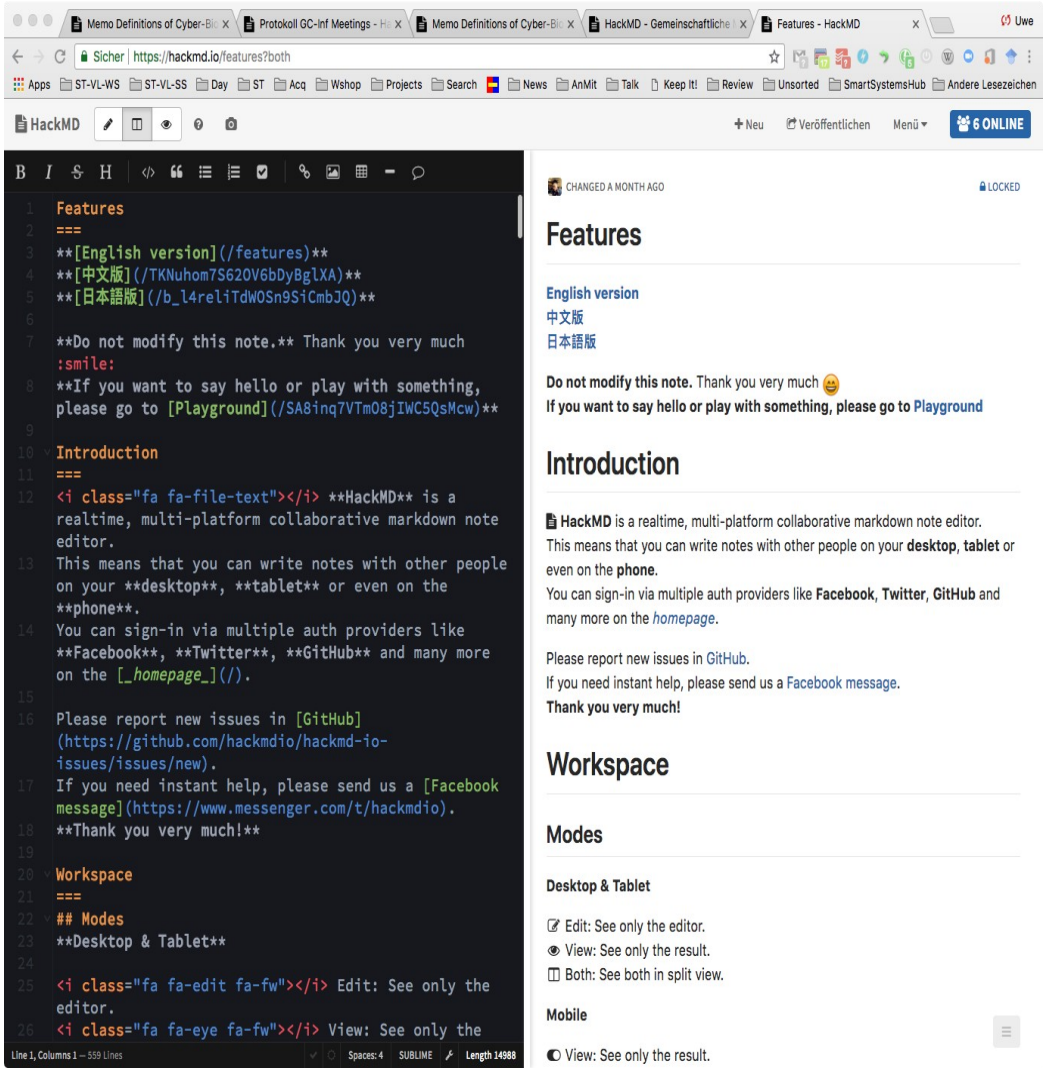


CLIP Hypothesis Testing for Lean Product Development

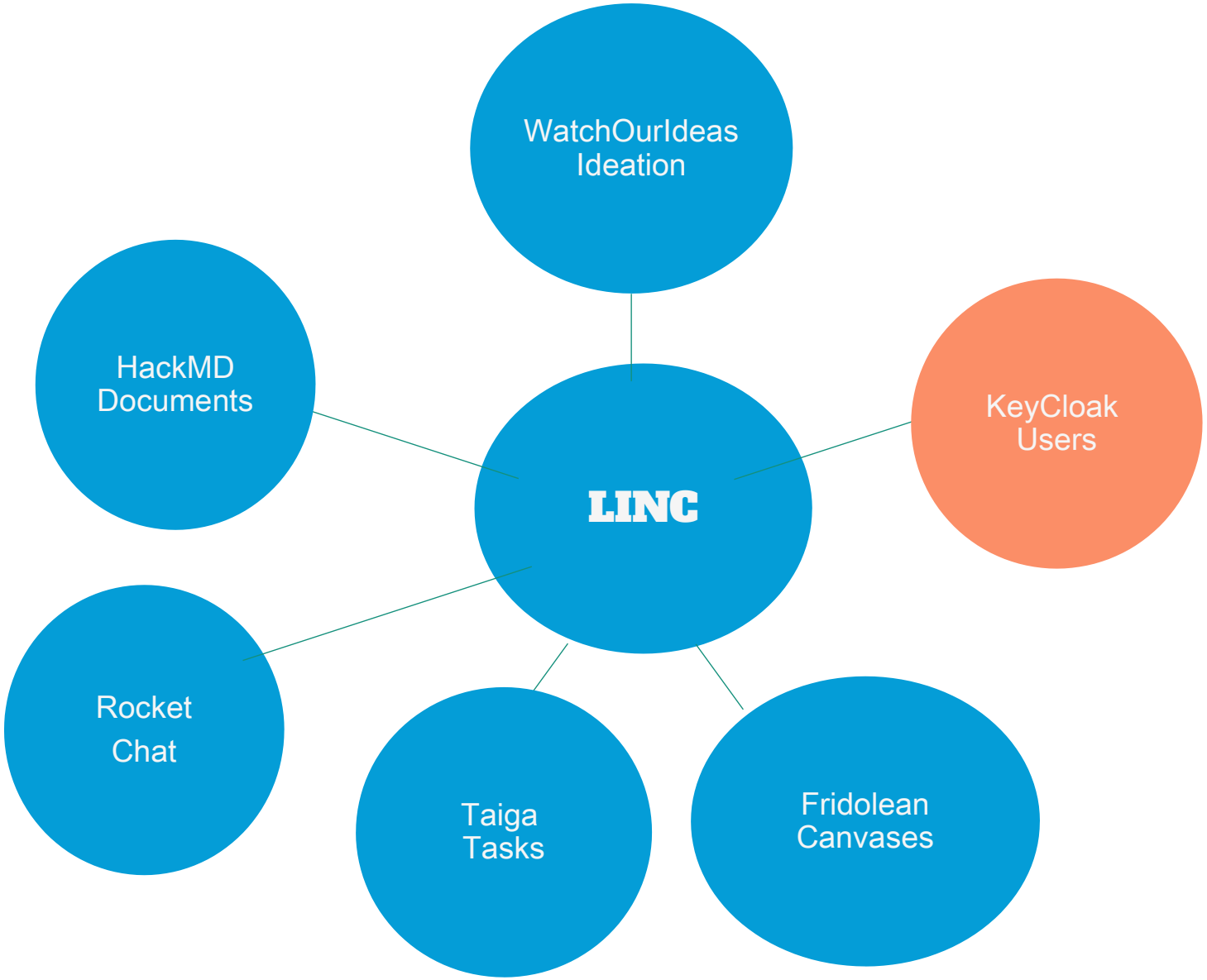


Document Creation for Business Cases with LINC Component „CodiMD“

- Like Google docs, but private to an idea room or idea board
- Collaborative editing of
  - Idea cases
  - Business Case documents
  - Internal documents
- User identity management with KeyCloak (OSS)



Single-Sign-On with User Federation Server Keycloak



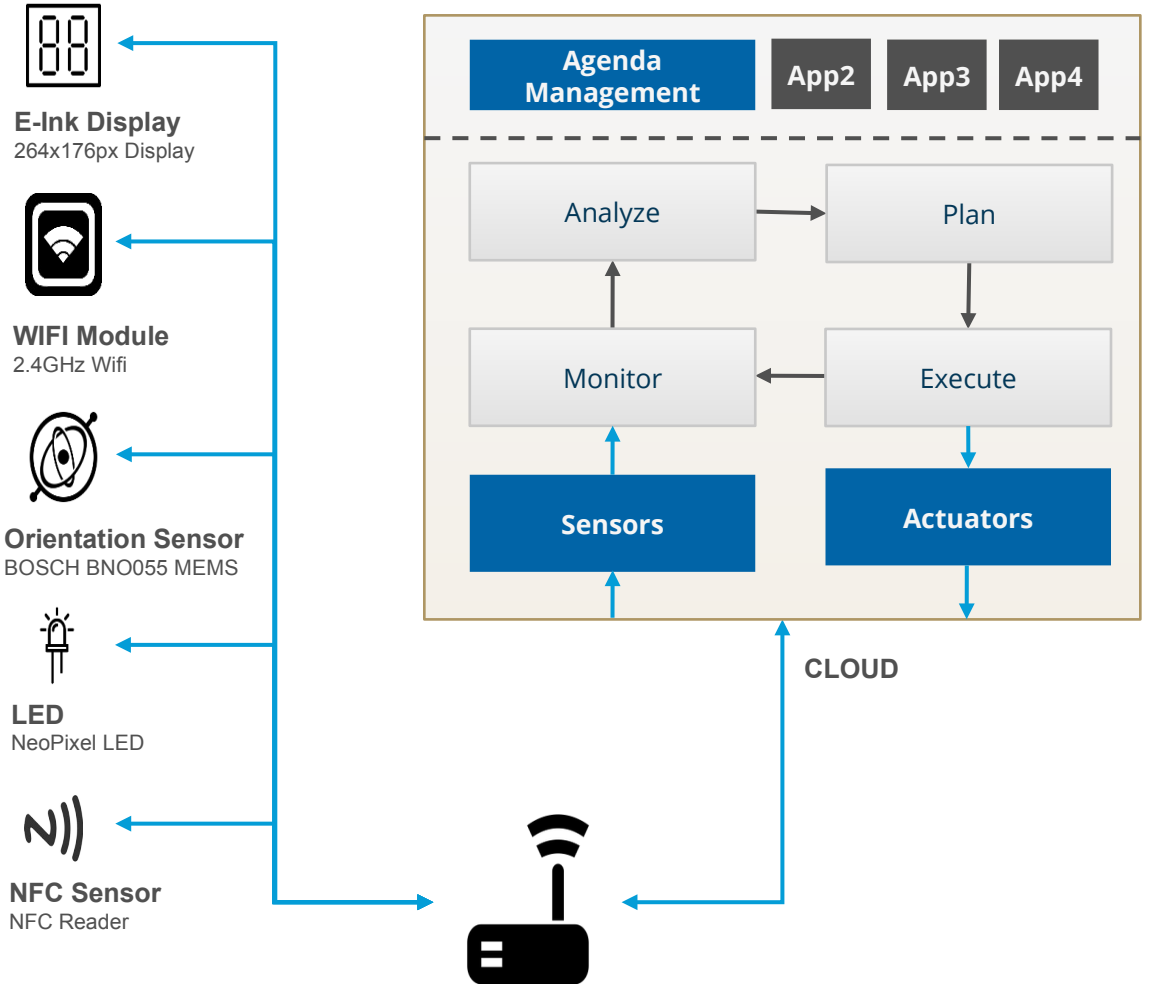
Cube-It Applications

1st IoSense Innovation Challenge

- „Road Sign To Go“ – Lisa Schönbach

1st Innovation Competition on LINC with Cube-Its (“cube intelligent thing”) – A Modular IoT Platform with Cloud Backend

- https://woi.inf.tu-dresden.de/ideadetail/cube-its---issue-tracking



Results: Top List of Ideas

- Road Sign Cube-It ToGo
- Restaurant Cube-It
- Mood Cube-It

- Cube-It for Robot Control

Restaurant Cube-It [Ronny Seiger]

- https://woi.inf.tu-dresden.de/ideadetail/cube-its-in-a-restaurant
- „Cube-Its can be used as personal devices for guests in restaurants/bars:
  - as a personal tab;
  - to signal the waiter when ready to order or to pay;
  - to see updates regarding meal preparation;
  - to see the current amount due;
  - and also to inform waiters about new guests or guests switching tables.“

Mood Cube-It [Mandy Korzetz]

- https://woi.inf.tu-dresden.de/ideadetail/moodcube-its
- „MoodCube-Its store personal preferences for home configurations;
- lighting, music and heating are adjusted depending on the current mood –
- set by the MoodCube-It's orientation.“

The End

- Explain how you edit a value proposition canvas in LINC.
- Explain how you create a .odt document from a .md document written in codiMD
- Explain how you use RocketChat for a customer problem interview.