UiO : University of Oslo

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New skills for the 21st century lawyer students

Creating Knowledge 2021

Steve Jobs 1995:

“Everyone in this country should learn how to program because it teaches you how to think”

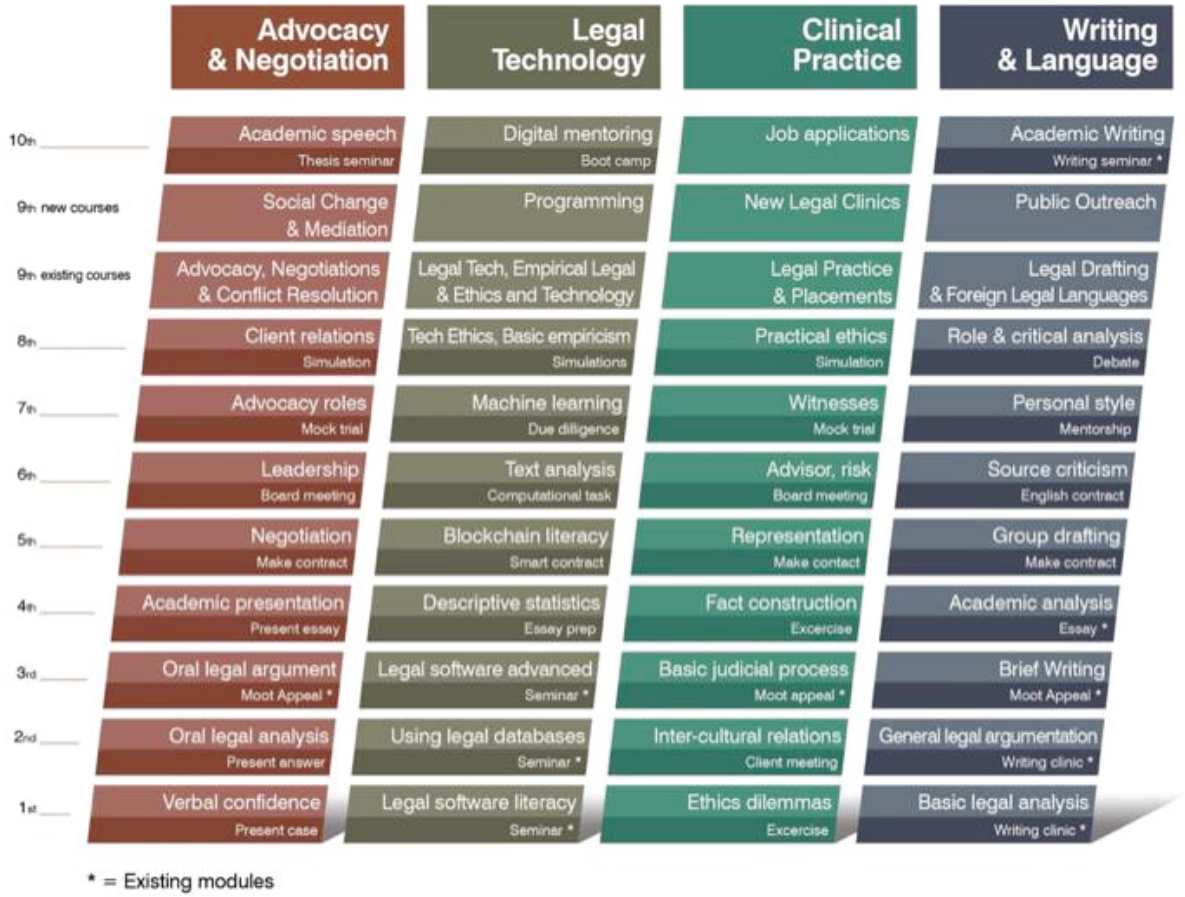
Legal education at the Faculty of Law, University of Oslo

- Traditional – lectures, not much activity and group work
- The digital lawyer – a project
- Centre for Experiential Legal Learning

> " The education of future lawyers who are better equipped for the workforce and have a deeper, relevant and critical understanding of law and its place in society "

CELL - Skills ladder

UiO : Det jur



* = Existing modules

Skills for the future of jobs

Digital skills for lawyers

- Tech skills – digital skills
  - Innovation
  - Programming
    - Machine learning, AI
  - Tehcnology design
  - Creativity

Computing in science education – computing in all education

- Incorporated into other courses
- Immediate use of new skills applied to relevant tasks
- Skills that are desirable in the job market
- Interdisciplinarity that has been lacking

UNIVERSITY
OF OSLO

Menu

← Studies ← Courses

JUS5671 – Legal Technology: Artificial Intelligence and Law

JUS5671 - Legal Technology: Artificial Intelligence and Law

- Learning outcomes
- Undervisningsmateriale

Level: Master **Credits:** 10

Teaching: Every spring **Examination:** Every spring **Teaching language:** English

Course description

→ Course content

→ Learning outcome

→ Overlapping courses

→ Teaching

The educational challenge: How to get hands on skills very fast - "The Boot camp method"

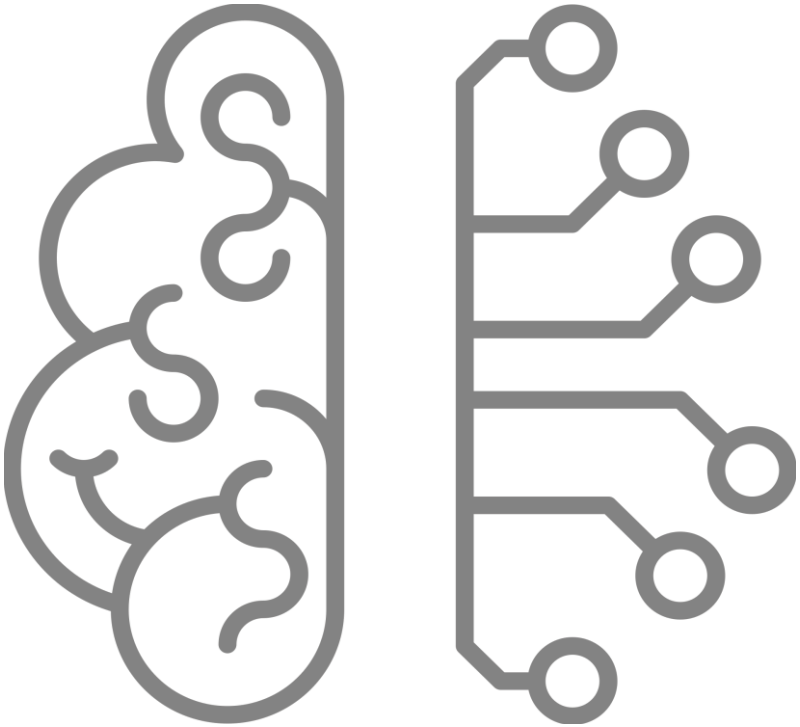
- Programming
- Artificial intelligence
- Design thinking

How to mobilize teachers, assistants, build competence?

- Do we find this competence in the library?
- Libraries as facilitators?
  - Digital scholarship centre (DSC)
  - Cooperation
    - USIT
    - IFI
    - AI Hub
- How to build competence?

The AI-hub at the University of Oslo

- Three main goals
  - Build up hardware earmarked for machine learning
  - Build and improve competence (both amongst researchers, but also our own staff)
  - Create a social arena for exchanging ideas and experience in using ML



Competence building

- Series of presentations from various fields, ML applied to different problems
- Share ideas and solutions between fields
- Spread awareness about possibilities for using ML in new fields and on new challenges

Collaboration with cloud computing providers

- Google Cloud Platform, Microsoft Azure
- Ability to scale up when extra hardware is needed
- Friendly user interface and readymade plug and play models (Speech to text, image analysis, etc)
- User training

Boot camp 2019

Pages
Files
Syllabus
Outcomes
Quizzes
Modules
Conferences
Collaborations
Office 365
Chat
Class Notebook
Rubrics
Settings

Pizza will be served and attendance in at least four sessions is expected.

1. **Introduction to Python and Legal Analytics**, Friday 5 April (12:00-15:00)
   - Place: SynchLaw
   - Course leader: Sergii Shcherbak
   - Course material: Jupyter Notebook
   - *Runar Lie* til stede

2. **Python Carpentry**, Friday 12 April (12:00-15.45)
   - Location: Castberg, Domus Bibloteca (3rd floor)
   - Course leader: Dan Michael Heggø, UiO Library
   - Course material: On github
   - *Runar Lie* and *Malcolm Langford* (1,5t) til stede

3. **Design thinking and prototyping**, Friday 26 April (12:00 -15.45)
   - Location: Professorboligen, UiO (tbc)
   - Course Leader: Andrea Gasparini, IFI/UiO Library
   - Course Material: Design Thinking , Gigamapping , Gigamap example , Design tools

4. **AI and MS Azure**, Friday 3 May (12:00-15.15)
   - Location: DN, room 540, UiO
   - Course leader: Microsoft Azure Team, Ted and Haakon
   - Course material: MAzureintro.pptx , MAzurepartII.pdf

"Python carpentry"

Programming with Python

The best way to learn how to program is to do something useful, so this introduction to Python is built around a common scientific task: **data analysis**.

Arthritis Inflammation

We are studying **inflammation in patients** who have been given a new treatment for arthritis.

There are 60 patients, who had their inflammation levels recorded for 40 days. We want to analyze these recordings to study the effect of the new arthritis t

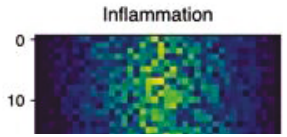
To see how the treatment is affecting the patients in general, we would like to:

1. Calculate the average inflammation per day across all patients.
2. Plot the result to discuss and share with colleagues.

Inflammation data

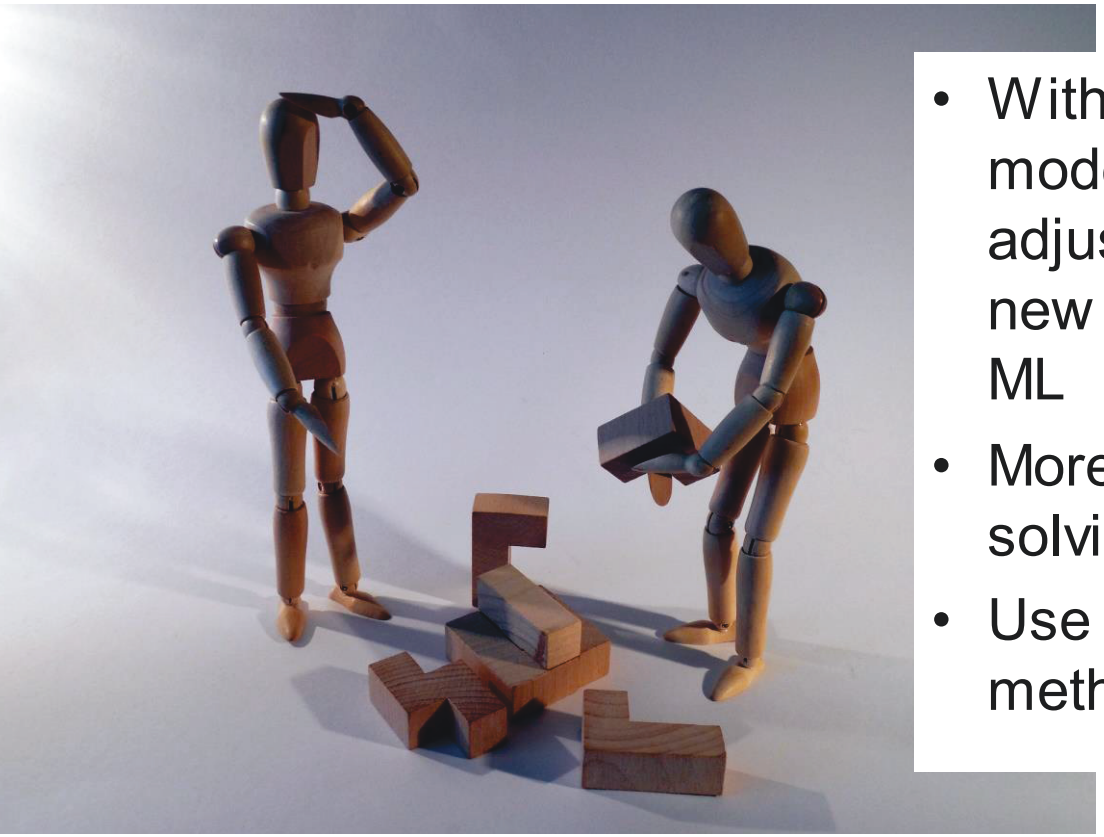
Patients	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
●	0	0	1	3	1	2	4

Analysis



Conc

Using machine learning with limted programming experience



- With ready models, or models that only need minor adjustments to be applied to new data, anyone can use ML
- More complex problem solving
- Use of computational methods in new fields

Artificial intelligence in practice

- Cognitive Search to extract information from documents
  - Microsoft
  - Example: JFK Files
- Example: Exela, tech business solution

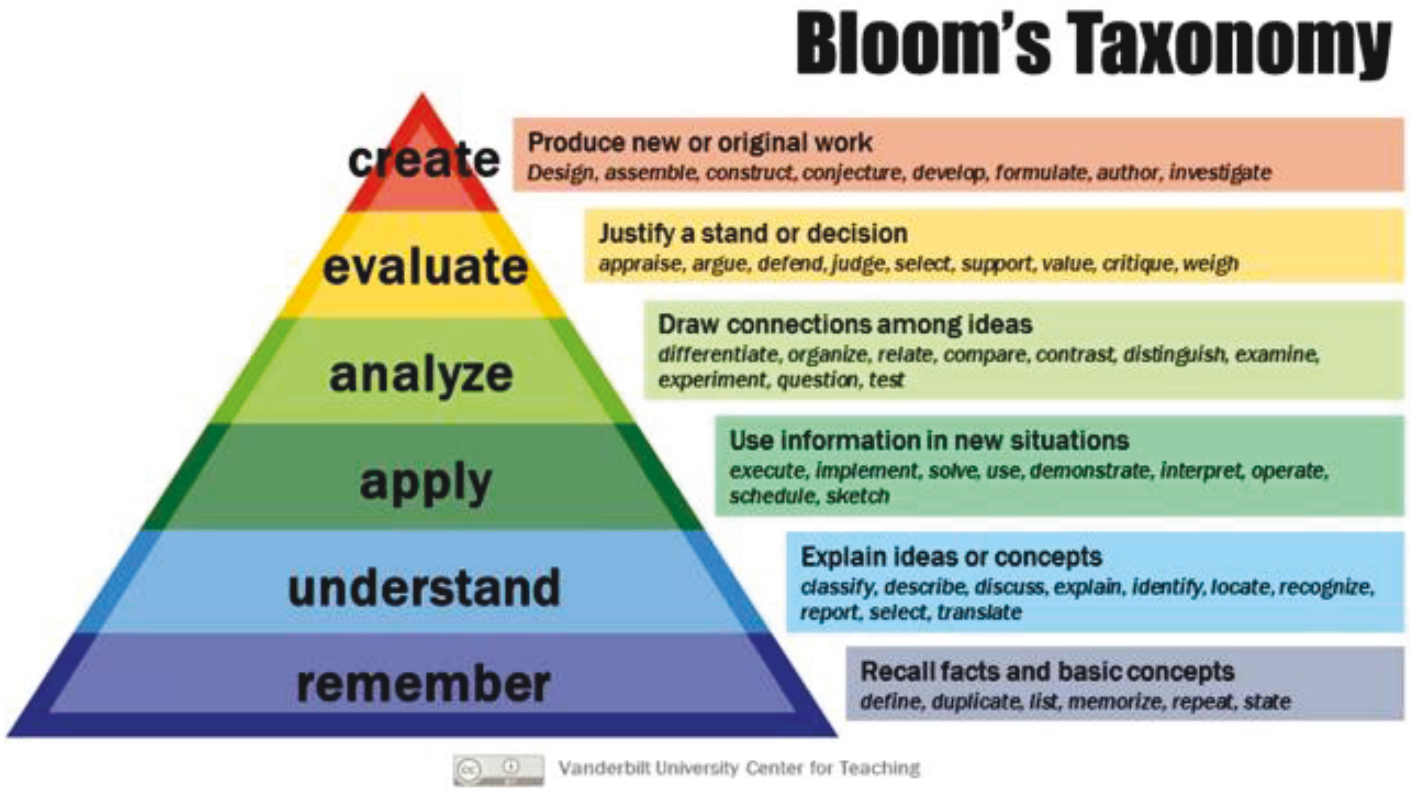
CourtQ

Exela's CourtQ case aggregation engine monitors and **mines public court records** from multiple sources, including PACER, and state and federal courts. Automated queries, keyword triggers, defined alerts, and **visual relationship mapping** compile the data you need, alert you when it arrives, and present it in a digestible format.

Automation

Our knowledge discovery systems gather and process information through automated systems that utilize optical character recognition, **natural language processing**, and **machine learning** capable of federated cognitive search and data management from structured and unstructured sources.

What did the students learn?



Design Thinking

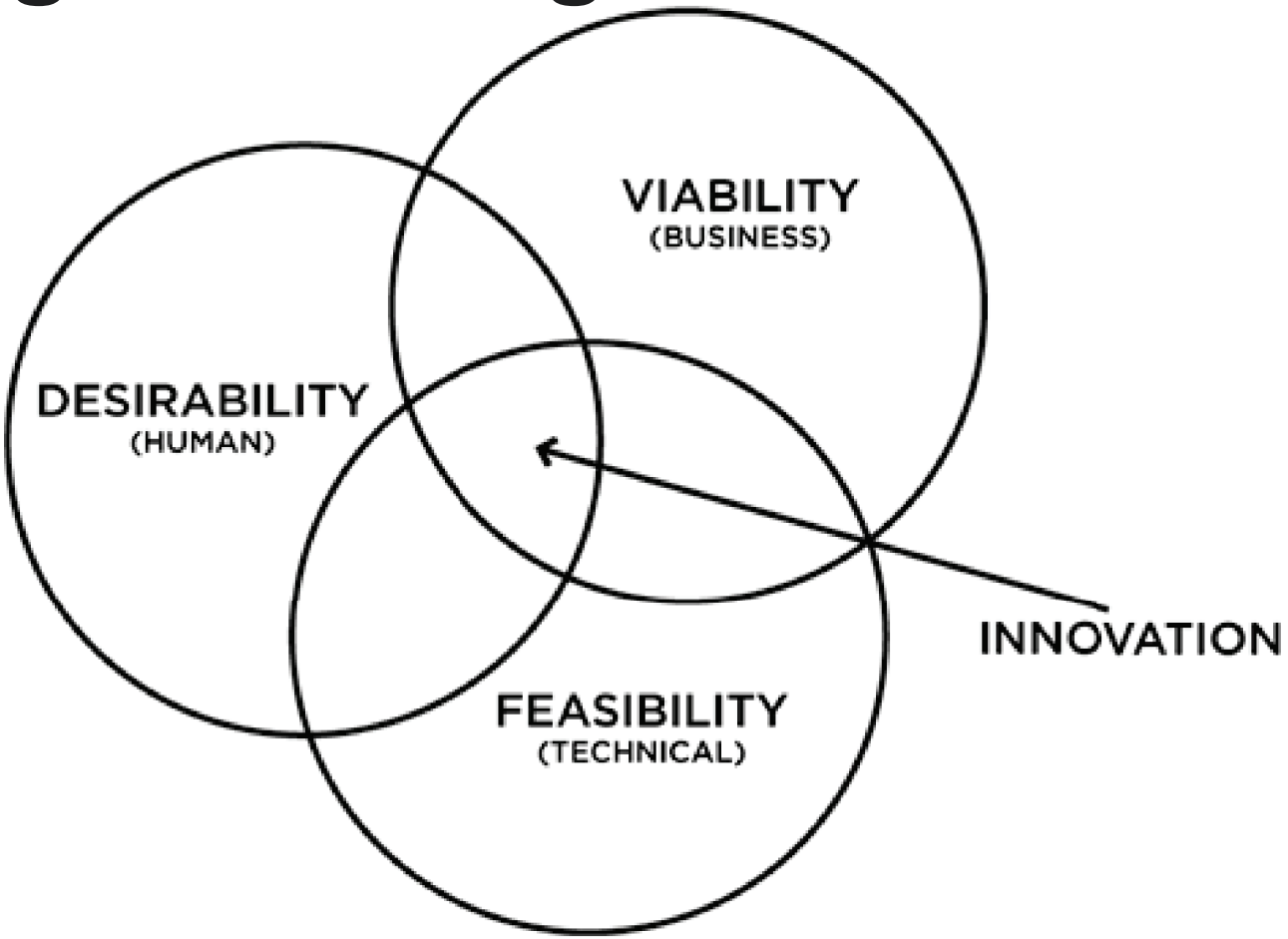


Image: Gasparini, A. (2015). Perspective and Use of Empathy in Design Thinking. *ACHI 2015, The Eighth International Conference on Advances in Computer-Human Interactions*, 49–54.

Design thinking is relevant for law students because it supports radical changes when used.

Design Thinking
Understanding human needs to design solutions that enhance quality of life

+

Visual Thinking
Figuring out the relations within a complex story and visualising them

+

UX Design
Create engaging online user experiences

+

Legal Thinking
Creating order in society and preventing and solving conflicts

Image: https://visualcontracts.eu/community/what-is-legal-design-thinking

Break-up and love letters is a method to gather information from users.

Love letter

Gives you a chance to express your positive feelings for a particular service, feature, product or location.

Break-up letter

Gives you a chance to focus on one service, function, product, or place that is not functioning properly.

Example

Dear AI-lawyer. I am done with you……

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Break-up and love letters were used to bring the students out of the comfort zone

Photo: Gasparini

Giga-mapping used in innovation to help defining areas and points for interventions and innovation

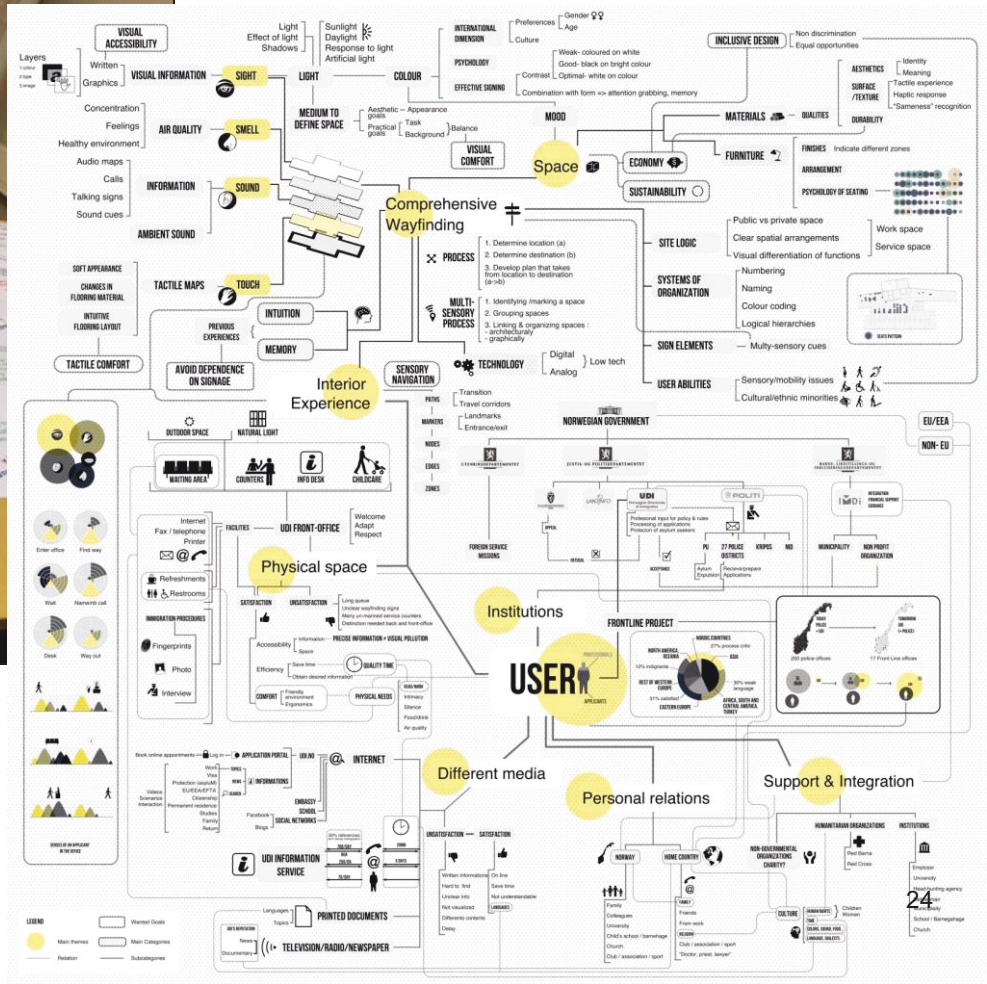

Photo: Gasparini
Gigamap: For UDI by Lea Brochard, Nicoletta Aveni, AHO 2011

Mapping all aspects of the problem area is mandatory. Ethnography and other methods can be used.

This was group-work

30 - 40 min

Presentation in plenum

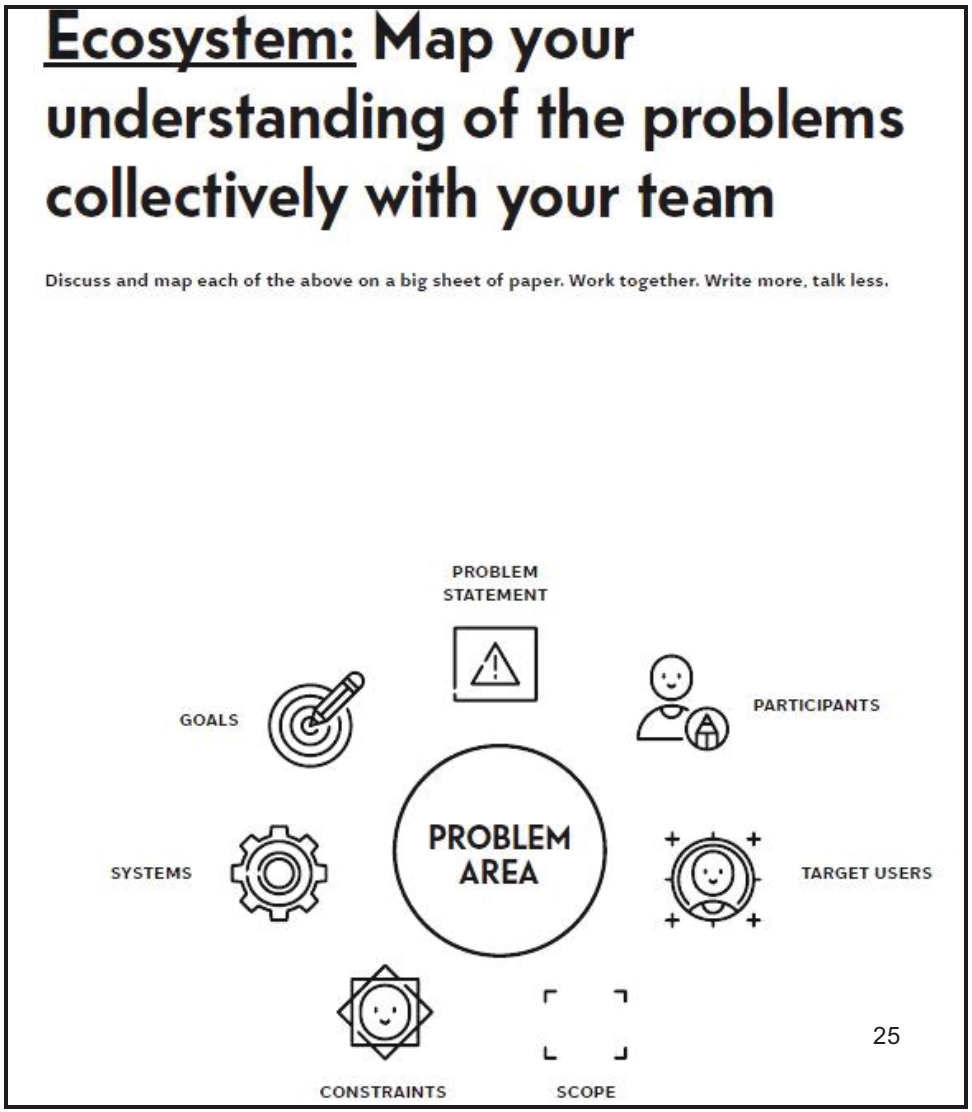

Image: www.frilux.no

Since the task of the bootcamp was to develop new ideas we helped the students with creative tasks

6 fast ideas!

1. Work alone (10 min)

2. Write down at least 6 new ideas and solutions based on the possibilities of the previous exercise. What more can you add to your project?

("In an ideal world." Do not be critical, too bad and wrong ideas are allowed).

Look also on the others Giga-Mapping and break-up and love letters – to get inspired.

Boot camp 2020

From on site to online –
we adapted DT to an online environment and used Padlet

Findings show interesting changes in the behavior of the law students

- Open minded
- Reacted in a positive way on design methods
- Boosted group work and mindset focused on starting the projects
- Several interesting and innovative ideas emerged!!

What did we learn?

- Difficult to learn programming and AI in such a short time – got a taste of it and some insight
- Next time make more subject spesific and work life relevant examples and exercises
- The students were on different levels, some had IT backgrounds – could use this as a resource for learning, or could divide into groups

What did we learn, continued...

- Design thinking can be used as a method of learning, be an intergrated part of the skills learning approach
- Also social learning? Informal atmosphere with pizza and socializing after
- Could be used for other library courses?

Boot camp 2021

Pages
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Collaborations
Office 365
Chat
Class Notebook
Rubrics
Settings

3. Expert Design and Legal Technology, 11 February 2021

    Bootcamp 1: Programming and expert design - Python, 12 February 2021

4. Data-driven approaches and Legal Technology, 18 February 2021

    Bootcamp 2: Programming and expert design - Neota Logic, 19 February 2021

5. Blockchain and Online Dispute Resolution, 4 March 2021

    Bootcamp 3: Overview of projects and essays – 5 March 2021

6. Ethics and social challenges, 11 March 2021

7. Legal Design I and Project/Essay Group Work I, 18 March 2021

    Bootcamp 4: User-driven design – 19 March 2021

8. Legal Design II and Project/Essay Group Work II, 25 March 2021

9. Project/Essay Group Work III, 8 April 2021

    Bootcamp 5: Advanced Programming – 16 April 2021

10. Project/Essay Group Work IV, 22 April 2021

    Bootcamp 6: Academic Writing – 29 April 2021* (Note new date)

Pedagogical and other take aways

- Innovative and flexible teaching methods
  - Collaboration and network
  - Competence mobilization, skill utilization
  - Expertise – pedagogy – real life examples/work relevance – learning by doing
    - Experiential learning
- "Boot camp method": Skills learning in new and relevant wrapping?

Thank you!