Information Architecture in eHealth

Doctors and Patients designing together

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THE ROLE OF INFORMATION ARCHITECTURE IN E-HEALTH

01 CHOOSING APPROACH
WHAT IS THE GOOGLE DESIGN SPRINT?

02 PATIENTS
HOW TO HELP PATIENTS MANAGING THEIR SITUATION?

03 MEDICAL DOCTORS
HOW TO HELP MEDICAL DOCTORS KEEPING TRACK OF THEIR PATIENTS?

04 CONCLUSION
WHAT HAVE WE LEARNED
THE MISSION

Build a health system through the design and implementation of data driven solutions that respond to real user needs and provide patients at home with tools for healthier lives.
THE PROJECT

Creating a new digital solution for cancer patients helping them to manage their situation.
THE GOAL

Understand how to design and develop in the most effective way a digital application for an effective healthcare.
THE APPROACH

Google Venture Design Sprints can work well in any industry, so why not using this model to design better healthcare solutions?!
The big idea of the Google Design Sprint is to establish a small team, plan the schedule for a week, and rapidly move from a problem to a tested solution.
DAY 1
UNDERSTAND
Lightning talks, “How might we” questions: how could the app resolve user problems?

DAY 2
DIVERGER / SKETCH
Review of existing ideas to remix and improve. Making sketches, to emphasize critical thinking and to create a big number of ideas and concepts.

DAY 3
DECIDING
Choice of the concept that have the best chance of achieving our long-term goal. Create a step-by-step plan for the prototype.

DAY 4
PROTOTYPING

DAY 5
USER TESTS
We need to empower patients to be an active part of their health care.

How can we empower the patients?
Patients need the right information at the right time!

How can we help the medical doctor?
They need as well relevant information at the right moment.

This can save lives!
Help patients to stay organised:

- Live with their disease and give them personalized information
- Organisation of medical appointments and to respect medical treatment plans
- Be prepared for surgical interventions
Other informational benefits for the patient

SEND PUSH NOTIFICATIONS
Send push notifications to update, remind and activate patients and their family and friends about their treatment.

DYNAMIC TIMELINE
Effectively educate patients through a dynamic timeline about the next steps in their treatments.

ASK QUESTIONS
Request feedback from patients by asking questions about their rehabilitation, pain level or other experiences.

VISUAL CONTENT
Inform patients about their treatments and organisation by adding visual content.
PATIENTS

MESSANGER

Write **personal messages** to the medical doctor

- Help the patient to be an **active member of the health care team**
- Exchanges with the medical doctor build **trust** and leads to better results, quality, safety, and satisfaction.
Healthcare professionals: Bring the important information to the surface.

If content is king, then the context is god:

1. Remote monitoring
2. Operation day
3. Office day
4. Consulting day
HOW TO PRESENT THE INFORMATION

« A picture is worth a thousand words »

Information dashboard design is the effective visual communication of data.

Example:

<table>
<thead>
<tr>
<th>Country</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1,983</td>
<td>2,343</td>
<td>2,593</td>
<td>2,283</td>
<td>2,574</td>
<td>2,838</td>
<td>2,382</td>
<td>2,634</td>
<td>2,938</td>
<td>2,739</td>
<td>2,983</td>
<td>3,493</td>
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<tr>
<td>Europe</td>
<td>574</td>
<td>636</td>
<td>673</td>
<td>593</td>
<td>644</td>
<td>679</td>
<td>593</td>
<td>139</td>
<td>599</td>
<td>583</td>
<td>602</td>
<td>690</td>
</tr>
</tbody>
</table>

Figure 1: A tabular display of call volume data.

Figure 2: The same call volume data as before, but presented in a way that brings patterns, trends, and exceptions to light.
FURTHER MAIN PRINCIPLES
Designing a real-time operational dashboard:

- Indicate tendencies instead of too many alert conditions
- Put the numbers in the right context
FURTHER MAIN PRINCIPLES

Designing a real-time operational dashboard:

- "Call out" of single important numbers
- Using charts
The goal is to inform people with precisely what they need in the way that they need it day in and day out.

A dashboard's strength depends on providing your audience with the current status of key metrics.
CONCLUSION

WHAT ARE THE NEEDS OF THE MEDICAL DOCTOR?

WHAT KIND OF INFORMATION IS THE PATIENT LOOKING FOR?

WHAT KIND OF INFORMATION WILL BE DISPLAYED AND HOW?

IN WHICH CONTEXT PEOPLE WILL USING THE APPLICATION?

IN WHICH CONTEXT PEOPLE WILL USING THE APPLICATION?

GOOD RESEARCH MEANS ASKING THE RIGHT QUESTIONS
CONCLUSION

Participatory design reduce the risk of failure for your end-product.

- DESIGN SPRINT: Understand prototype test
- SKETCH SOLUTIONS: Find an answer for the problem
- DESIGN MOCKUPS: Check to respond to real user needs
- UI-DESIGN: Interface design of the Application

User participation | User validation | User testing
Design Sprint is a user centered approach and especially in Healthcare:

**EMPATHY IS KEY!**

The major part of the problem solving is actually to define the problem:

**DESIGNING TOGETHER IS THE SOLUTION!**
THANK YOU.

QUESTIONS?

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