A journey of medical disruption

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LEO®
Innovation Lab

DISRUPTIVE CONCEPTUALISATION DAY
10.00-10.45 am, 20TH SEPTEMBER 2016, DTU
UBER
World's largest Taxi company
Owns NO Taxis

airbnb
World's largest Accommodation provider
Owns NO Real estate

Owns NO Real estate
How do you build *disruptive innovation* in a pharma organisation?

- You do not…

- You build a new organisation which looks into doing things in a different way by:
  - Recruiting people from other industries who might find novel solutions to common and/or complicated problems
  - Solve issues in a different way through e.g. digital HealthCare
Introducing...
Innovation to improve life for people living with a skin condition
International setup with a flat structure

- SF Hub (1p)
- CA Toronto Hub (2p)
- UK London Hub (4p)
- FR Paris Hub (3p)
- DK Copenhagen Hub (32p)
- ES Copenhagen Hub (1p)
Solutions above LEO Pharma brands
Towards Integrated Care

Developing integrated care is a multi-disciplinary approach which requires stepwise innovation, superior use of data and patient centricity.
Reframing a problem, may be the solution...
1. Build new elevator
2. Make it faster
3. Ask people to take the stairs
Way of Working Model (WoW model)

**Ideas**
- Workshops
- Pitch Rounds
- Ideas (Partners/Stakeholders/Patients)
- External Inspiration

**Work process**
- 100 Days
- Hackerton
- Crowd Innovation
- Competition

**Experiment phase => BETA Launch**

**Next Step to Decide**
- Spin out – Separate entity
- LEO Innovation Lab Service
- LEO Pharma A/S
- Back to idea generator

**Open Source Innovation**
Pipeline from Aug 2015 to Sep 2016
Pipeline filled and multiple experiments in progress

1. Idea
   - Elly
   - Kids
   - Testing Wearables

2. Explore
   - Prediction & Behavioural Change
   - Virtual reality kids
   - SkinTop

3. Concept MVP
   - Pso Academy
   - Synbiotics

4. 100 days build
   - Flaxm
   - Unisk

5. Experiment
   - Imaging
   - HelloSkin
   - visualDx
   - Klikkit
   - TREAT

6. Launch
   - LEO innovation Lab ventures
Today, medicine is largely reactive.

It waits until a person is sick and then treats a disease, with varying levels of success.

The question is where is medicine going…
Future of medicine

Digital revolution

Social Network Revolution

Systems medicine

Convenience revolution

Future of medicine
1. Digital Revolution in HealthCare
Mobile health apps may help you
BIG DATA WILL FURTHER IMPROVE PREDICTIVE ALGORITHMS
Most people think they are significantly healthier than they are.

<table>
<thead>
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<th>Category</th>
<th>Excellent/very good</th>
<th>Good</th>
<th>Fair/poor</th>
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<tbody>
<tr>
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<td>66</td>
<td>27</td>
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<td>High-risk</td>
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<td>Chronic</td>
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<td>33</td>
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</tr>
<tr>
<td>BMI &gt;30</td>
<td>29</td>
<td>43</td>
<td>28</td>
</tr>
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</table>

1Based on derived health profile.
Source: McKinsey Retail Healthcare Consumer Survey
It is not all about big-data. If we track behavior we MUST aim for a behavioral change.
Social Media activity vs. GPS location

Potential Measures:
- Passive data collection
  - GPS
  - Accelerometer
  - App Usage
  - Compass
  - Decibel Level
  - Gyroscope
  - IP Address / WIFI
  - Social media activity
  - Social media listening (psychometric)
- Active Data collection
  - Pulse and HR
  - Sleep
  - Wearables

Physical activity (steps and GPS)
(0, inactive; 10 very active)
3. Systems Medicine

From: Wheelock ÅM, Lung- Allergiforum 2012
P4 medicine is the clinical face of systems medicine

Its two major objectives are to
1) quantify wellness and
2) demystify disease, through:

- Predictive measures,
- Preventive initiatives,
- Personalized care
- Participatory engagement.
3. Social network revolution

If Facebook were a country, it’d be the world’s 3rd largest.
Computers’ judgments of people’s personalities based on their digital footprints are more accurate and valid than judgments made by their close others or acquaintances (friends, family, spouse, colleagues, etc.)
What will make people take their medication (adherent)?
Digital Health solutions may improve adherence
Projects - Klikkit
Make products intelligent to connect with online treatment plan
By start-up Director Anne Fleischer
Projects - Klikkit

Very positive response and strong proof of concept

“Klikkit made it more fun to use the products.”

“The buttons are helping me remember to use the treatments — particularly while I’m away from home and not in my normal routine.”

“It’s the insight you get over time that makes Klikkit worth it.”
Projects - Imagine

Track your flare-up progress in detail
Projects - Imagine
Quantifying and tracking progress that would otherwise be ignored
However we cannot solve all problems ourself...
Enables breakthroughs
TWO ONLINE CHALLENGES IN OCTOBER

LOOKING FOR BREAKTHROUGH TECHNICAL SOLUTIONS
1st Relief Itch

A technical breakthrough in relieving itch
US$ 50.000

Go to www.leoinnovationlab.com
2nd Prediction

How to use predictive analytics to help take out the uncertainty from skin diseases
US$ 100.000

Go to www.leoinnovationlab.com
Innovation to improve life for people living with a skin condition

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