Digital Ecosystems

Emerging digital ecosystems and their impact for insurers

XVI SemPRe - Seminário Português de Resseguro, Lisbon, 24 September 2019
Dr. Evangelos Avramakis, Head Digital Ecosystems R&D, Swiss Re Institute, Zurich
what was the job to be done?
(no telecom network available)
The potential solution was already here...

....but did not fit to the customer’s infrastructure (no windows messenger app)
Line's messaging service was launched in 2011 by the Japanese unit of South Korean Internet service provider Naver Corp. after the quake-tsunami tragedy damaged telecoms infrastructure nationwide, forcing millions of people in Japan to resort to online resources to communicate.

Bought by Rakuten for 0.9 bn USD worth >500 bn USD
IPO 2016 worth 9 bn USD
IPO 2017 worth 33 bn USD
<table>
<thead>
<tr>
<th>Overall Downloads</th>
<th>App Store Downloads</th>
<th>Google Play Downloads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 🎉 FaceApp</td>
<td>1 🎉 FaceApp</td>
<td>1 💬 Messenger</td>
</tr>
<tr>
<td>2 📧 WhatsApp</td>
<td>2 🎥 TikTok</td>
<td>2 📧 WhatsApp</td>
</tr>
<tr>
<td>3 🎁 Messenger</td>
<td>3 🎥 YouTube</td>
<td>3 🎁 FaceApp</td>
</tr>
<tr>
<td>4 🎁 Facebook</td>
<td>4 🎁 Instagram</td>
<td>4 🎁 Facebook</td>
</tr>
<tr>
<td>5 🎁 TikTok</td>
<td>5 🎁 Google Maps</td>
<td>5 🎁 TikTok</td>
</tr>
<tr>
<td>6 🎁 Instagram</td>
<td>6 📧 WhatsApp</td>
<td>6 😍 Likee</td>
</tr>
<tr>
<td>7 😍 Likee</td>
<td>7 🎁 Facebook</td>
<td>7 🎁 SHAREit</td>
</tr>
<tr>
<td>8 🎁 SHAREit</td>
<td>8 😍 Pinduoduo</td>
<td>8 🎁 Instagram</td>
</tr>
<tr>
<td>9 🎉 Snapchat</td>
<td>9 🎁 Messenger</td>
<td>9 📧 UC Browser</td>
</tr>
<tr>
<td>10 🎁 YouTube</td>
<td>10 🎁 Netflix</td>
<td>10 🎉 Snapchat</td>
</tr>
</tbody>
</table>

Note: Does not include downloads from third-party Android stores in China or other regions.
AR supported personalized eyewear

Style and preview your custom-tailored glasses

Source: Typology Eyewear (Company Website) accessed 05.02.2019
www.topologyeyewear.com
You Can Virtually Try On Sneakers With This Cool App – Geek.com

https://www.geek.com/tech/you-can-virtually-try-on-sneakers-with-this-cool-app-1772785/

https://wanna.by/

on demand experiences
Insurance crash experience (Australia)
...so it’s not all about TECHNOLOGY?
...it’s all about the customer experience!

- reducing customer effort
- reducing customer time
- reducing customer costs

1. What needs to get fixed in the insurance industry

2. Customer journey & experience as key driver in digital sales

3. From digital products, to platforms, to ecosystems
The Challenge: **Complexity**

**Insurance** as an industry might just be too complex for consumers!

Percentage of consumers who say these businesses’ products are easy to understand


```
0  5  10  15  20  25  30  35  40  45

Online retailers
Local retail stores
National retail stores
Streaming TV/music service
Mobile phone providers
Credit card rewards/frequent flyer programs
Banks
Cable TV providers
Insurance
Insurance

Auto or Home/Renter
Life or Annuity
```
The Engagement Gap in the Financial Services Industry

Estimated average number of customer contacts over 20 years:

<table>
<thead>
<tr>
<th>Category</th>
<th>Estimated Average</th>
<th>Average Interactions per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance</td>
<td>30-50</td>
<td>~2</td>
</tr>
<tr>
<td>Non-life Insurance</td>
<td>60-70</td>
<td>~3</td>
</tr>
<tr>
<td>Motor Insurance</td>
<td>70-90</td>
<td>~4</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>270-300</td>
<td>~15</td>
</tr>
<tr>
<td>Retail</td>
<td>800-1'000</td>
<td>~50</td>
</tr>
<tr>
<td>Telco</td>
<td>1'400-1'600</td>
<td>~70</td>
</tr>
<tr>
<td>Banking</td>
<td>2'100-2'300</td>
<td>~110</td>
</tr>
<tr>
<td>Technology</td>
<td>2'300-2'500</td>
<td>~120</td>
</tr>
<tr>
<td>Social Media</td>
<td>&gt;7'500</td>
<td>~400</td>
</tr>
</tbody>
</table>

1 Adapted from: Berger-de Leon M. et al. (2016) McKinsey - Transforming life insurance with design thinking

Average interactions per year
New competition arriving – this time from outside!
...and a significant number considering introducing AI services

Established market players

- Aggregators
- Intermediaries
- Banks / Insurers

New entrants

- Tech Players
- Start-Ups “Challengers”

The Challenge: New competition arriving
Business Insider (02.09.2016) - Tesla is planning to offer custom insurance plans
http://uk.businessinsider.com/tesla-is-planning-to-offer-custom-insurance-plans-2016-9
B2C
TRÖV DIRECT
TRÖV EMBEDDED
Tröv’s flagship on-demand insurance application

B2B2C
TRÖV PRIVATE LABEL
Private labeled apps and web front ends for insurers (B2B2C)

B2B
TRÖV PRODUCT LINE
API accessed services offered from the platform, embedding Tröv capabilities

Source: Dowds M, Chief Strategy Officer Trov, Instech London, BT Center 20 June 2017
http://www.instech.club/
Airbnb's Host Guarantee
Free property damage protection of up to $1 million USD for every listing
Experience Protection Insurance
Free liability insurance of up to $1 million USD for most experiences
APIs als the new golden standard:
i.e. Lemonade API

- Commerce
- Real Estate Marketplaces
- Financial Service
- Smart Home Security
- Insurance As a Service (IaaS)
- Everything Else

Adapted from: Lemonade.com (28.05.2018)
https://www.lemonade.com/api
NPS 70
Renewal rate 97%
Source: Lemonade Blog (20.06.2018) We suck, sometimes
https://stories.lemonade.com/lemonade-transparency-review-blog-eced69282ac8
# Healthcare and Health Insurance shakeup - big tech is preparing

<table>
<thead>
<tr>
<th>Company</th>
<th>Strengths</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>• Google Cloud Platform</td>
<td>• Personalized, low cost health insurance&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>• AI - Cloud infrastructure</td>
<td>• Population health</td>
</tr>
<tr>
<td></td>
<td>• Oscar Health investment</td>
<td>• Precision medicine</td>
</tr>
<tr>
<td></td>
<td>• Verily Life Sciences</td>
<td>• Clinical decision support</td>
</tr>
<tr>
<td>Amazon</td>
<td>• AWS</td>
<td>• Personalized, low cost digital health insurance&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>• Alexa</td>
<td>• Medical supply services</td>
</tr>
<tr>
<td></td>
<td>• Supply delivery</td>
<td>• Personalized health benefits</td>
</tr>
<tr>
<td>Apple</td>
<td>• iPhone consumer base</td>
<td>• Remote patient monitoring</td>
</tr>
<tr>
<td></td>
<td>• Apple Watch</td>
<td>• mHealth</td>
</tr>
<tr>
<td></td>
<td>• App Store frameworks</td>
<td></td>
</tr>
<tr>
<td>Microsoft</td>
<td>• Azure</td>
<td>• Population health</td>
</tr>
<tr>
<td></td>
<td>• Healthcare NExT</td>
<td>• Precision medicine</td>
</tr>
<tr>
<td></td>
<td>• Microsoft Genomics</td>
<td>• Clinical decision support</td>
</tr>
</tbody>
</table>

Source: Laurie Beaver (19.07.2018) BIG TECH IN HEALTHCARE: How Alphabet, Amazon, Apple, and Microsoft are shaking up healthcare — and what it means for the future of the industry. Business Insider

1 Susan Morse (08.02.2018) What the Amazon, Berkshire Hathaway, JPMorgan deal means for payers. Healthcare Finance News
2 Lydia Ramsey & Zachary Tracer (26.03.2019) $3.2 billion startup Oscar Health is plotting its expansion into new states as it moves into a competitive insurance plan market. Business Insider
Apple Watch detected a heart rate that rose above 120 BPM while you appeared to be inactive during the 10-minute period starting from 03:07.
Apple’s Watch can detect an abnormal

- heart rhythm with 97%¹
- sleep apnea with 90%¹
- diabetes with 85%¹
- hypertension with 82%²
- AFib with 98%³

accuracy!

Source:
1 Tison, GH et al. (2017). *Cardiovascular Risk Stratification Using Off-the-Shelf Wearables and a Multi-Task Deep Learning Algorithm*
3 Stanford (2018) Apple heart study

Afib = atrial fibrillation
ONE SOLUTION FOR YOUR WHOLE POPULATION.

From keeping healthy people healthy, to supporting those with chronic conditions, you now have one easy solution for all of your employees. Introducing Fitbit Care™.

LEARN MORE

Join Fitbit’s medical director, Dr. John Moore, for an in-depth look at behavior change science and how we’ve integrated it into everything we do.

OUR NEW HEALTH PLATFORM

Learn how Fitbit Care supports the full spectrum of care from wellness and prevention to chronic condition and complex care management.

FOR EMPLOYERS

Learn why 70 of the Fortune 500 partner with Fitbit for turnkey corporate wellness programs.

FITBIT NOW OFFERS HEALTH COACHING
Lifesum

Healthy Living. Simplified.

Get started at lifesum.com

Source:
https://lifesum.com/
Agenda

1. What needs to get fixed in the insurance industry
2. Customer journey & experience as key driver in digital sales
3. From digital products, to platforms, to ecosystems
Interactions being dynamically generated through AI
L’Oreal acquires Toronto-based Modiface. Electricrunway.com

https://electricrunway.com/loreal-acquires-toronto-based-modiface/
Front of Mind

- Amazon: 69%
- Sephora: 41%
- Ulta: 37%
- Walmart: 36%

Middle of the Pack

- Macy's: 33%
- Target: 33%
- Walgreens: 25%
- CVS: 25%
- JCPenney: 17%
- eBay: 17%

Emerging

- MAC Cosmetics: 15%
- Kohl's: 14%
- Dollar Tree: 14%
- Nordstrom: 14%
- Drugstore.com: 14%

Source: AT Kearney (2017) Beauty and the E-Commerce Beast
Amazon and L’Oréal let you digitally try on makeup. VentureBeat.com
Do you know these brands?
Mobile E-Commerce shopping apps – most active users
(combined iPhone and Android, Q1 2019)

<table>
<thead>
<tr>
<th>INDONESIA</th>
<th>MALAYSIA</th>
<th>PHILIPPINES</th>
<th>THAILAND</th>
<th>VIETNAM</th>
<th>SINGAPORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tokopedia</td>
<td>Lazada</td>
<td>Lazada</td>
<td>Shopee</td>
<td>Lazada</td>
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<td>2</td>
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<td>Lazada</td>
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<tr>
<td>3</td>
<td>Bukalapak</td>
<td>Taobao</td>
<td>ZALORA</td>
<td>AliExpress</td>
<td>Qoo10 Singapore</td>
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<tr>
<td>4</td>
<td>Lazada</td>
<td>11street</td>
<td>Amazon</td>
<td>JD CENTRAL</td>
<td>Shopee</td>
</tr>
<tr>
<td>5</td>
<td>JD.id</td>
<td>AliExpress</td>
<td>AliExpress</td>
<td>Amazon</td>
<td>Sendo</td>
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<tr>
<td>6</td>
<td>Biblin.com</td>
<td>ZALORA</td>
<td>BeautyMNL</td>
<td>Adayroi</td>
<td>Taobao</td>
</tr>
<tr>
<td>7</td>
<td>ZALORA</td>
<td>Lelong.my</td>
<td>eBay</td>
<td>AliExpress</td>
<td>Tiki.vn</td>
</tr>
<tr>
<td>8</td>
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<td>eBay</td>
<td>Alibaba.com</td>
<td>AliExpress</td>
<td>Shopee</td>
</tr>
<tr>
<td>9</td>
<td>Zilingo Shopping</td>
<td>Sephora</td>
<td>Chilindo</td>
<td>Zilingo Shopping</td>
<td>ZALORA</td>
</tr>
<tr>
<td>10</td>
<td>Amazon</td>
<td>Amazon</td>
<td>Alibaba.com</td>
<td>Alibaba.com</td>
<td>Amazon</td>
</tr>
</tbody>
</table>

Source: App Annie (20.05.2019) What You Need to Know About Southeast Asia’s Growing M-Commerce Landscape
<table>
<thead>
<tr>
<th>Rank</th>
<th>App Name</th>
<th>Developer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WhatsApp Messenger</td>
<td>WhatsApp Inc.</td>
</tr>
<tr>
<td>2</td>
<td>Messenger</td>
<td>Facebook, Inc.</td>
</tr>
<tr>
<td>3</td>
<td>Facebook</td>
<td>Facebook, Inc.</td>
</tr>
<tr>
<td>4</td>
<td>Pinterest</td>
<td>Pinterest</td>
</tr>
<tr>
<td>5</td>
<td>Sync.ME - Caller ID &amp; Contacts</td>
<td>Sync.ME LTD</td>
</tr>
<tr>
<td>6</td>
<td>LinkedIn Job &amp; Career Finder</td>
<td>LinkedIn Corp.</td>
</tr>
<tr>
<td>7</td>
<td>Reports+ for Instagram</td>
<td>MobileX Yazilim</td>
</tr>
</tbody>
</table>

Sources:
Similarweb (12.09.2019)
Source: Whysker Blog (09.01.2018) Neural Networks at wysker
https://medium.com/wysker/the-wysker-app-play-discover-shop-76a8c59a7768
https://tubikstudio.com/case-study-tasty-burger-ui-design-for-food-ordering-app/  
(accessed 20.04.2019)
Fluid and smart interfaces

https://dribbble.com/shots/2467806-Car-Control-App-Interface
on demand experiences
Global Insurer
Switzerland (09.04.2018)

Third party liability (mandatory)

✓ Third party liability insurance is required by law
✓ Insurance covers property damage and bodily injury that you cause to third parties with your car
✓ We defend you against unjustified claims by third parties
✓ Sum insured up to CHF 100 million

You must have third party liability insurance to obtain the official registration documents for your car from road traffic authorities.

Available option: Coverage for gross negligence
[ins.] will not ask you to pay back the costs of a loss caused through gross negligence (exceptions: alcohol, driving while impaired, speeding, hazardous overtaking, participation in unauthorised races with motor vehicles).

Global Insurer
UK (09.04.2018)

Just some of the benefits of [insurance] Insurance

Our uninsured driver promise gives you extra peace of mind

We promise to put things right if an uninsured driver causes damage to your car – plus we'll give you back any excess and you won't lose any No Claims Discount

*You will need to provide the make, model and registration number of the other car in the event of a valid claim.

Keep on the move with our courtesy car cover

We'll give you our standard courtesy car to use whenever your car is with our approved repair network. For even more peace of mind, if your car is stolen or written off, you can rely on a courtesy car from us for up to 14 days.

*Subject to availability following a valid claim. Standard 3 door 1 litre manual car provided until repair completed by our approved repairer or up to 14 days if the car has been

Global Insurer
Germany (09.04.2018)

Grundschutz oder mehr? Entscheiden Sie sich für eine Versicherungsart

Kfz-Haftpflicht


Tellkasko

Mit der Tellkasko sichern Sie sich gegen Schäden ab, die an Ihrem eigenen Fahrzeug entstehen – zum Beispiel durch Diebstahl, Tierkollision oder Tierbiss, durch Unwetter, Überschwemmungen, Erdrutsche oder Lawinen.

Global Insurer
Italy (09.04.2018)

1. LA POLIZZA AUTO CHE ALLENA LA TUA GUIDA
  venile
   APPROFONDISCI
   ASSISTENZA E SICUREZZA IN OGNI MOMENTO
   APPROFONDISCI
   METTI AL SICURO DAI FURTI LA TUA AUTO
   APPROFONDISCI

La polizza auto [ins.] SEI IN AUTO CON STILE ti fa scoprire qualcosa di nuovo sul tuo comportamento di guida. Grazie al servizio di Real Time Coaching potrai mettervi alla prova il tuo stile di guida e migliorarlo quotidianamente. Installato gratuitamente al momento della sottoscrizione della polizza auto, il Real Time Coaching è un dispositivo satellitare che ti avverte con un segnale luminoso se acceleri o freni troppo bruscamente, aiutandoti a
70% (re)insurers believe they are failing to meet customer expectations

- **not meeting expectations**: 70%
- **meeting expectations**: 20%
- **don’t know**: 10%

Source: Audi (30.08.2017) Audi launches Virtual Reality technology in dealerships
A variety of IoT and AI start-ups are developing solutions for the generation of contextual and behavioural insights.
music lover, city person, active
daily lunch break walk
left work, walking, listening to music

Gyroscope
Motion/Acceleration
GPS
Sentiance delivers insights into consumer behavior
<table>
<thead>
<tr>
<th>Event</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth driving</td>
<td>87%</td>
</tr>
<tr>
<td>Legal driving</td>
<td>73%</td>
</tr>
<tr>
<td>Anticipative driving</td>
<td>54%</td>
</tr>
<tr>
<td>Summary score</td>
<td>71%</td>
</tr>
</tbody>
</table>

**Car trip score**

- **Smooth driving**: 87%
- **Legal driving**: 73%
- **Anticipative driving**: 54%
- **Summary score**: 71%

**Events**

- Walking

Sentiance delivers insights into consumer behavior

Sentiance delivers insights into consumer behavior.


- Work Traveller
- Early Bird
- Social Activity: High
- Couch Potato
- City Worker
- Brand Loyalty: Supermarket
- Resto Lover
- Rural Home
Facebook could collect 25% of an average user’s browsing history by linking website cookies with the Facebook account!

Social Mapper uses facial recognition to correlate social media profiles across different sites on a large scale.

Sources:
LinkedIn, Facebook, Twitter, GooglePlus, Instagram, Vkontakte, Weibo, Douban

Output:
Organisations name, searching via LinkedIn, folder full of named images, CSV file with names and url’s to images online

Understanding customer journeys is key for key insight generation. How to **get insights** into **non owned touchpoints**?

Agenda

1. What needs to get fixed in the insurance industry
2. Customer journey & experience as key driver in digital sales
3. From digital products, to platforms, to ecosystems
....let focus on the future of mobilityyear?
digital products/services
digital platforms
Managing mobility journeys

- air travel
- public train
- ride hailing
- micromobility
integrated mobility journey
How many mobility apps...?
With 50% of WeChat users reportedly spending 90 minutes per day on the social network, Tencent earns fees from vendors’ commercial transactions as well as from users’ cash withdrawals and credit card repayments.

Alipay’s mobile payments service as the gateway to Ant’s broader suite of financial services. Ant has been aggressively investing in offline partnerships and strategic moves — such as Starbucks, its Hema, and public transportation systems.
digital ecosystems
Do you intend to keep your customer interactions?

Do you assume to loose full control but stay relevant?
...and how do you plug-in into these mobility ecosystems?
What needs to get fixed in the insurance industry

Customer journey & experience as key driver in digital sales

From digital products, to platforms, to ecosystems
Thank you

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