InsurTech: Business Models and Disruptive Potential

Jiahua (Java) Xu
Institute of Insurance Economics
London, April 2018
Agenda

1. InsurTech Introduction (approx. 10 minutes)
2. Business Models and Disruptive Potential (approx. 40 minutes)
3. Selected Startup Profiles (approx. 20 minutes)
4. Open Discussion and Wrap-Up (approx. 5 minutes)
Introduction
The term “digitization” is used very widely

**Definition:** Converting information into a **digital**, i.e. computer-readable, format

(Collins Dictionary)

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1. **Industrial Revolution**
   - **Mechanization**
     - Introduction of mechanical production facilities powered by water and steam (mechanical loom: 1784)

2. **Industrial Revolution**
   - **Mass Production**
     - Division of labor for mass production by means of electrical energy (conveyor belt: 1870)

3. **Industrial Revolution**
   - **Automatization**
     - Utilization of electrical engineering and IT for automatization (programmable control: 1969)

4. **Industrial Revolution**
   - **Digitization**
     - Digitization of interactions and processes as well as employment of intelligent systems (smart devices, big data, AI)

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The change in individual behavior induced by the technology can radically reshape markets.
Consumer behavior is changing at full speed

Of “digital natives” and the “sharing economy”

Born in the age of digital technology:
- 95% own a smartphone
- 75% run a social network profile
- 60% only inform themselves on the Internet

Access instead of ownership:
90% of 14-29-year olds cannot imagine to live without smartphones and Internet – but very well without their own car
Insurance companies are digital late bloomers...

The difference between requirements and reality

<table>
<thead>
<tr>
<th>Expectations in the 21st century</th>
<th>Reality</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Expectations" /></td>
<td><img src="image2.png" alt="Reality" /></td>
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</table>

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Is total industry disruption at hand?
And the hype continues…

“InsurTech” and “InsuranceTech” in the media

Source: CB Insights

\[\text{\textit{Aviva trialling telematics app for private car insurance}}\]
\[\text{\textit{Transactor partners with Zurich}}\]
\[\text{\textit{Wearable Tech Is Plugging Into Health Insurance}}\]
\[\text{\textit{MetLife Starts InsurTech Accelerator}}\]
\[\text{\textit{AXA unveils ‘Big Data’ tool for brokers}}\]
\[\text{\textit{AXA launches dedicated InsTech Incubator}}\]
\[\text{\textit{FCA Holds InsurTech Forum}}\]
InsurTech – What does that mean?

**Definition:** Portmanteau, composed of Insurance and technology

**Characteristics**

- Generally used to describe the growing startup landscape
- InsurTech startups target niche markets or market shares of incumbents
- They employ technology-driven business models
- Disruptive on existing markets
The startup landscape is growing rapidly and hard to keep track of

Which business models are hidden behind these logos?

Source: Startupbootcamp Insurance, Venture Scanner

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VC investors are increasingly focusing on InsurTech startups

Overview of InsuranceTech Financings 2011-2016

Focus is still on the US, but promising approaches also exist in Europe and Asia

Source: CB Insights
In addition, more and more insurers are getting involved

Tech startup investments of insurance companies 2010–2016

Source: CB Insights

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Business Models and Disruptive Potential
What is a business model and why should it be innovated?
Today, long-term success depends on business model innovation

The four dimensions of a business model (Example: “pay per use”)

What do you offer to the customer?
(trōv: on-demand insurance)

Why does it work?
(trōv: flexibility, ease of use)

Who are your target customers?
(trōv: Generation Y)

How is the value proposition created?
(trōv: customers are billed based on duration of use through mobile app)

What do you offer to the customer?
(trōv: on-demand insurance)

Who are your target customers?
(trōv: Generation Y)

How is the value proposition created?
(trōv: customers are billed based on duration of use through mobile app)

Business model innovation means modifying at least two of these four dimensions

Source: Gassmann, Frankenberger, Csik (2014)
• How does Trov handle fraud?

We [...] have many measures in place to safeguard against fraud. Basically, you can expect all of the anti-fraud measures that you would see from other insurance companies, plus a few extra Trov-specific measures that grow out of our DNA as an innovative tech company.

• Yunfeng Financial Group (云锋金融) & MassMutual

This transaction will also enable cross-referrals of existing customers of Yunfeng FG and MassMutual Asia, thereby facilitating a wider customer reach.

[T]he US$1.7 billion acquisition of the Asian unit of Massachusetts Mutual Life Insurance [...] won’t complete [...] until the third quarter of 2018 due to the complex approval process involved. [...] Yunfeng will own 60 per cent of MassMutual Asia.
**InsurTechs combine technology with innovative business models**

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<tr>
<th><strong>Role in Ecosystem</strong></th>
<th><strong>Distributors</strong></th>
<th><strong>Risk Carriers</strong></th>
<th><strong>Technology Providers</strong></th>
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<td><strong>Comparison Portals</strong></td>
<td>Check24</td>
<td>Lemonade</td>
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<td>comparis.ch</td>
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<td><strong>Taking a season ticket to services</strong></td>
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<td><strong>Making use of what you know</strong></td>
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<td><strong>Benefiting from specialized know how</strong></td>
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<td><strong>Your success is my success</strong></td>
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<td><strong>Killing two birds with one stone</strong></td>
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<td><strong>Enable transactions between individuals</strong></td>
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<td><strong>Pay as you go</strong></td>
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<td><strong>Digitizing physical products</strong></td>
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</tbody>
</table>

*Source: Braun/Schreiber (2017)*
## Descriptions of the identified business model patterns

### Key dimensions and examples

<table>
<thead>
<tr>
<th>Model</th>
<th>What?</th>
<th>How?</th>
<th>Why?</th>
<th>Example(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Commerce</td>
<td>Traditional products, services, and support</td>
<td>Via electronic systems / computers / online channels</td>
<td>Global reach of customers through the internet</td>
<td>Amazon</td>
</tr>
<tr>
<td>Peer-to-Peer</td>
<td>Transactions between private individuals</td>
<td>Trusted platform for safe and efficient handling of transactions</td>
<td>Charge transaction fees for organizing the relationships</td>
<td>Airbnb</td>
</tr>
<tr>
<td>Digitization</td>
<td>Digital products instead of physical products (the latter may be converted)</td>
<td>Existing business processes and functions can be reproduced online</td>
<td>Reduced overheads, elimination of intermediaries, streamlined distribution</td>
<td>iTunes</td>
</tr>
<tr>
<td>Pay-per-Use</td>
<td>Customers pay for products and services based on their effective usage</td>
<td>The specific usage of a product or service is metered and charged</td>
<td>Customers are billed based on the number of units or the duration of use</td>
<td>Swisscom</td>
</tr>
<tr>
<td>Cross Selling</td>
<td>Complementary products and services beyond the company’s base offering</td>
<td>Existing relationships are used to save customers the cost of searching</td>
<td>Generates additional revenue with existing resources and competencies</td>
<td>IKEA</td>
</tr>
<tr>
<td>Licensing</td>
<td>Intellectual property such as software, patents, and copyrights</td>
<td>The rights are commercialized rather than sold outright (capitalized)</td>
<td>Constant revenues can be generated from more than one interested party</td>
<td>IBM</td>
</tr>
<tr>
<td>Leverage Customer Data</td>
<td>Collection, processing, and analysis of customer data</td>
<td>Customer data is acquired and its value unlocked with appropriate tools</td>
<td>Customer data as a profitable resource that can be marketed</td>
<td>Facebook</td>
</tr>
</tbody>
</table>

**Source:** Gassmann, Frankenberger, Csik (2014)
Startups have several advantages for business model innovation

Differences between insurers and InsurTech startups

<table>
<thead>
<tr>
<th>#</th>
<th>Dimension</th>
<th>Insurer</th>
<th>InsurTech Startup</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tolerance for Failure</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>Average Age of Employee Tenure</td>
<td>20+ Years</td>
<td>18 Months</td>
</tr>
<tr>
<td>3</td>
<td>Technology</td>
<td>Legacy</td>
<td>Cutting-Edge</td>
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<tr>
<td>4</td>
<td>Tendency under Stress</td>
<td>Passive-Aggressive</td>
<td>Overtly Aggressive</td>
</tr>
<tr>
<td>5</td>
<td>Focus on Value</td>
<td>Long-Term / Shareholders</td>
<td>Short-Term / Backers (Exit)</td>
</tr>
<tr>
<td>6</td>
<td>Finish Quality</td>
<td>Perfection</td>
<td>Minimum Viable Product</td>
</tr>
<tr>
<td>7</td>
<td>Funding</td>
<td>Via Committee</td>
<td>Via Individual or Small Firm (VC)</td>
</tr>
<tr>
<td>8</td>
<td>Decision-Making</td>
<td>Collaborative</td>
<td>Independent, Entrepreneurial</td>
</tr>
<tr>
<td>9</td>
<td>Speed of Decision-Making</td>
<td>Glacial</td>
<td>Lightning</td>
</tr>
<tr>
<td>10</td>
<td>Decision-Making Bias</td>
<td>Internal Efficiency</td>
<td>Market Impact</td>
</tr>
<tr>
<td>11</td>
<td>Time to Market</td>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>12</td>
<td>Company Culture</td>
<td>Conservative</td>
<td>Progressive</td>
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</tbody>
</table>

Source: Braun/Schreiber (2017)
What is conceivable for the future?

From organizations to marketplaces

The world’s largest taxi company owns no vehicles

The world’s most popular media owner creates no content

The world’s largest accommodation provider owns no real estate

The world’s most valuable retailer has no inventory

“Something interesting is happening”

Banks (FinTech)

investments and credit without banks

Insurers (InsurTech)

Insurance companies as pure „risk warehouses“ – or even risk transfer without insurance companies?

“The Internet is the most powerful mechanism we can imagine to match individuals that need something, and people with something to offer.”

Source: Crunch Network (2015), Tom Goodwin

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Disruptors and disruptees: some historical examples

Disruption of industries happened time and time again…
What characterizes a disruptive innovation?

**Disruptive versus sustaining innovations**

**Sustaining Innovation:**
Improvement of existing products/services for existing customer groups (stepwise / through jumps)

**Disruptive Innovation:**
Competitor introduces products/services at the lower end of the market and relentlessly moves upwards

**Typical characteristics of disruptors:**

- **Smaller size / fewer resources** (incumbents are large / well-funded)
- **Specific target segment / niche** (incumbents target “mainstream”)
- **Simpler products / services** (suitable functionality at low prices)
- **Smaller margins / scalability** (incumbents chase higher profitability)
- **Innovative business model** (incumbents may fail to innovate)
- **Anticipation of future customer needs** (incumbents focus on current customers)

*Disruption is a process, not an event at a fixed point in time*

Being on a disruptive trajectory does not guarantee success

Key success factors

- **Disruptive Trajectory**
  (threatens replacement or disintermediation of incumbent)

- **Unique Business Model**
  (should be difficult to emulate by competitors)

- **Cutting-Edge Technology**
  (is the number one enabler of disruption)

- **Access to Capital**
  (beyond seed and round A funding)

- **Ecosystem Knowledge**
  (insurance may be a big market but not an easy one)

- **Added Value for the Targeted Customers**
  (satisfaction of key customer needs)
How can incumbents respond?
The first startup generation focuses on risks and the client interface

Locating the entrants in the ecosystem of the insurance industry

Source: Braun/Schreiber (2017)
Different contenders require different reactions

The I.VW-Strategy-Matrix for InsuranceTech

Available Capital

ample
limited

sustaining disruptive enabling

Type of Innovation

Source: Braun/Schreiber (2017)

Jiahua (Java) Xu | InsurTech | April 2018
Different contenders require different reactions

The I.VW-Strategy-Matrix for InsuranceTech

<table>
<thead>
<tr>
<th>Available Capital</th>
<th>Type of Innovation</th>
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<tbody>
<tr>
<td>ample</td>
<td>sustaining</td>
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<tr>
<td>limited</td>
<td>disruptive</td>
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<td></td>
<td>enabling</td>
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“lightweights”

→ observe

Source: Braun/Schreiber (2017)
Different contenders require different reactions

The I.VW-Strategy-Matrix for InsuranceTech

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<td>ample</td>
<td>“usual suspects”</td>
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Source: Braun/Schreiber (2017)
Different contenders require different reactions

The IVW-Strategy-Matrix for InsuranceTech

- **ample**
  - Available Capital
  - **“usual suspects”**
    - compete
  - **“lightweights”**
    - observe
  - **“threats”**
    - invest

- **limited**
  - sustaining
  - disruptive
  - enabling

Source: Braun/Schreiber (2017)
Different contenders require different reactions

The IVW-Strategy-Matrix for InsuranceTech

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Type of Innovation

- sustaining
- disruptive

Source: Braun/Schreiber (2017)
Different contenders require different reactions

### The I.VW-Strategy-Matrix for InsuranceTech

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<td>limited</td>
<td>→ observe</td>
<td>→ invest</td>
<td>→ cooperate</td>
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**Type of Innovation**
- Sustaining
- Disruptive

*Source: Braun/Schreiber (2017)*

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University of St. Gallen
We ask **incumbents**: Which InsurTech categories do you consider to offer the most opportunities to the industry?
We ask **incumbents**: Which InsurTech categories do you consider to offer the most opportunities to the industry?

![Graph showing the ranking of InsurTech categories by primary insurers and reinsurers.](image-url)

(1=no opportunities; 2=most opportunities)
We ask **incumbents**: Which InsurTech categories do you consider to offer the most opportunities to the industry?

![Graph showing the assessment of different InsurTech categories by primary insurers, reinsurers, and brokers.](image-url)

1. Comparison Portals
2. Digital Brokers
3. Digital Insurers
4. P2P Insurance
5. On-demand Insurance
6. Insurance Cross-selling
7. Big Data/Insurance Software
8. Internet of Things
9. Blockchain/Smart Contracts

(1=no opportunities; 2=most opportunities)
We ask **incumbents**: How do you assess the following InsurTech categories relative to your own firm?
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We ask **incumbents**: How do you assess the following InsurTech categories relative to your own firm?
Selected Startup Profiles
The peer-to-peer insurance platform

Example: friendsurance

So funktioniert Friendsurance:

1. Versicherung abschließen
   Finde eine günstige Versicherung, die deinen individuellen Bedürfnissen entspricht.

2. Mit anderen verbinden
   Schließ dich online mit anderen Versicherten zusammen. Ein Teil eurer Versicherungsbeiträge fließt in einen gemeinsamen Topf.

Bei Schadensfreiheit erhältst du bis zu 50% deiner jährlichen Beiträge zurück.

Insurance value chain:
Peer-to-Peer Insurance

Business Model Patterns:
Peer-to-Peer and E-Commerce

Role in Ecosystem:
Distribution

I.VW Matrix

Avoidable Capital
- extensive
- limited

Type of Innovation
- sustaining
- disruptive
- complementary

Betrag
Kosten der Verarbeitung
Vertrieb
Kleine Schäden
Verwaltung

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The B2C online comparison portal

Example: 

Insurance value chain:
Comparison Portal

Business Model Patterns:
E-Commerce and Layer Player

Role in Ecosystem:
Distribution

I.VW Matrix

Available Capital

extensive
limited

Type of Innovation

sustaining disruptive complementary
Personalized und integrated Risk management

Example: Sherpa

Insurance value chain:
- Digital Insurer

Business Model Patterns:
- Digitization, E-Commerce, Cash
- Machine and Direct Selling

Role in Ecosystem:
- Risk Carriers

«Underwriting» of the whole customer

1) Individual risk profile
2) In-depth analysis of existing coverage
3) Optimization of the insurance portfolio
4) Adjustment to changing conditions
The digital nonlife insurer

Example: Lemonade

Insurance value chain:
Peer-to-Peer Insurance

Business Model Patterns:
Peer-to-Peer and E-Commerce

Role in Ecosystem:
Risk Carriers

P2P-insurance with a charity aspect
The telematics technology provider

Example: TrueMotion

Learn why Progressive chose TrueMotion above all others to power their Snapshot mobile platform.

TrueMotion in A Nutshell

It’s clear. We drive results.
The move towards behavior based insurance impacts your bottom line.

- LOWER CLAIMS COSTS BY 50%
- HIGHER CUSTOMER RETENTION
- LOWER PROGRAM COSTS

Insurance value chain:
Internet of Things

Business Model Patterns:
Leverage Customer Data and
Layer Player

Role in Ecosystem:
Technology

I.VW Matrix

Available Capital
- extensive
- limited

Type of Innovation
- sustaining
- disruptive
- complementary

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The internet-of-things specialist

Example: nest

Insurance value chain:
Internet of Things

Business Model Patterns:
Leverage Customer Data and
Layer Player

Role in Ecosystem:
Technology

I.VW Matrix

Available Capital
limited
extensive

Type of Innovation
sustaining disruptive complementary

√
What other InsurTech start-ups do you know?

Where do they fit?

Insurance value chain:

Business Model Patterns:

Role in Ecosystem:

I.VW Matrix

Available Capital

limited

extensive

Type of Innovation

sustaining

disruptive

complementary
Open Discussion and Wrap-Up
Wrap-Up

Main takeaways of the workshop

• Introduction to the current InsuranceTech landscape  
  ...to understand the impact of digitization on the insurance sector

• Categorization of InsuranceTech startups and their business models  
  ...to reveal blank spaces in the current landscape

• Disruptive potential of and success criteria for InsuranceTech startups  
  ...to assess the threat and the likelihood of business success
Contact details

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