Agenda

A Framework and infrastructure

Munich Re (Group)
Joachim Wenning
CEO – Munich Re (Group)

ERGO Digital Ventures
Mark Klein
Chief Digital Officer – ERGO Group

Reinsurance
Marcus Winter
Head of Reinsurance Development

Data and analytics
Wolfgang Hauner
Chief Data Officer

B Business transformation

Cyber insurance
Daljitt Barn
Global Head of Cyber

Canadian multi-channel distribution
Mary Forrest
President & CEO, North America (Life and Health)

ERGO Mobility Solutions
Karsten Crede
CEO – Mobility Solutions

Mass customisation in India
Ritesh Kumar
Managing Director and CEO HDFC ERGO India

C Business extension

Internet of Things
Greg Barats
President and CEO – HSB

Digital Partners
Andy Rear
CEO – Digital Partners

nexible
John Paul Pieper
CEO – nexible

Investor Day 2017 2
Digital business models have been penetrating all industries since almost 20 years

Product launch
1998 RETAIL
2008 MUSIC
2009 COMMUNICATIONS
2010 TRANSPORTATION

Insurance industry in the midst of digital transformation
Insurance industry perspective – Future winners will leverage “digital ingredients”

Traditional insurance value drivers will remain

- Risk assessment
- Products

Primary Insurance
- Sales
- Operations

Asset Management
- New risks, extended insurability, and risk mitigation/prevention
- New products, solutions, and extended services
- Effectively serve the (hybrid) customer across all channels
- Efficiency increases and automation

Additional value-creation lever: Data analytics and technology

Opening the gates to new businesses

- Changing front ends
- Changing needs of transforming industries (from standard products to system solutions)

This will sophisticate/extend “traditional” and create “solution” business for transforming industries
To remain a winner in the future, “digital ingredients” are embedded in our business strategy

**STRATEGIC FOCUS**
- Improve and grow the Group portfolio
- Invest and divest according to strategic fit and performance
- Digital transformation
  - Build new businesses

**RESULT FOCUS**
- Strict bottom-line focus
- ERGO Strategy Programme
- Create new business opportunities
- Leverage underwriting and innovation
- Strong asset management

**DIGITAL FOCUS**
- Invest in technology, data, and agile IT
- Partner with start-ups and InsurTechs
- Create new market access and new business models
- Co-create new businesses with clients

**LEADERSHIP FOCUS**
- Rigorous execution
- Powerful leadership
- Reduce complexity and drive business
- Push to win

**BASIS**
- Reliable results
- Client and business focus
- Leading brand
- Attractive place to work
- Attractive returns to shareholders
- Leading functional competencies
- Driving change
- Transparency
- Strong capital position
To achieve concrete results from innovation and digitalisation, we systematically follow three steps:

1. **Build the foundation**
   - Establish innovation infrastructure
   - Create separate room for innovation
   - Promote cultural change

2. **Explore and learn**
   - Scout technology and trends
   - Drive idea generation
   - Experiment along variety of initiatives

3. **Focus and execute**
   - Develop Munich Re portfolio through business transformation and business extension
   - Consequently drive key activities

**OUR AMBITION**
Fully exploit value-creation potential from “digital ingredients”
We have invested in building a global foundation for innovation across the Group

Global network of >300 FTE dedicated to innovation activities and >200 FTE with a data science background

Invest in global innovation footprint
- Princeton/New York
  - Internal incubator
  - THE LAB US
  - Cooperation with MIT
- Silicon Valley
  - Innoscouts
  - Partnership with Plug & Play Accelerator
  - Venture Capital
- Madrid
  - Mundi Lab – startup accelerator
- Tel Aviv
  - Innoscouts
  - Partnership with The Junction accelerator

Invest in projects
>€160m invested beyond FTE assignment since 2015

Invest in people

Invest in data analytics and technology infrastructure
- Bi-modal IT, smart data analytics, data storage (“data lake”), cooperation with technology analytics providers

Invest in acquisitions
>€60m invested in more than 10 corporate venture capital (CVC) projects and start-ups with primary focus on InsurTech, IoT and data specialists – further M&A activities based on strategic fit and performance/scalability
We turn ideas into business potential based on a managed process from idea generation to implementation.

- **Encourage idea generation**
  - >420 innovation ideas assessed, based on >1,000 proposals

- **Testing and learning (from success and failures)**
  - >220 innovation projects and pilots (thereof ~130 ongoing)

- **Market launch and scaling**
  - >20 implementations

Execution or early exit:
- ~200 ideas discarded
- ~90 projects stopped
We take an active role to continuously transform and extend our business – Selected projects to be discussed today

**Business transformation**
- Develop & strengthen traditional core
  - Enhance value proposition
  - Extend insurability
  - Alter the value chain
  - Increase efficiency
- Cyber insurance
- Canadian multi-channel distribution
- Mass customisation (India)

**Business extension**
- Explore & discover
  - Extend traditional core, develop new business models
  - Identify new business fields
- Sensor-driven business models (IoT)
  - Pure digital player (flexible)
  - Digital Partners
  - ERGO Mobility Solutions

Additionally: Ongoing analysis of “question marks”, e.g. Blockchain-driven business models

DISTANCE TO THE CORE
We realise innovation synergies from our set-up as RI and PI through our project on Interlocked Business Models

Key areas for innovation synergies

- Joint innovation activities and building of business models, e.g. IoT, digital platforms, and ecosystems
- Joint use of resources
  - Product development competencies, e.g. cyber
  - Innovation infrastructure, e.g. innovation scouting
  - Technology know-how and infrastructure, e.g. data analytics, artificial intelligence
- Leverage global presence of RI, e.g. for ERGO Mobility Solutions in China
- Corporate venture capital (CVC) infrastructure and competencies

Create a strategic advantage from primary insurance and reinsurance set-up
ERGO Digital Ventures
Mark Klein
We live in a time of technological change

**Devices and sensors**

- 30 billion connected devices by 2020

**Data**

- 90% of data was gathered in the last 2 years

**Computing power**

- It took Google 1,202 CPUs and 176 GPUs to beat the world champion at the game Go

**Artificial intelligence**

- A new world of chatbots, robots, autonomous cars ...

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1 Source: HIS. Images: used under license from shutterstock.com
Our origin and mission: Turn ERGO into the leading provider for digital solutions

ERGO Strategy Programme

- **fit**
- **digital**
- **successful**

**Net investment of ~€1bn (2016–2020)**

- €400m
- €400m
- €200m

1. Founding of ERGO Deutschland
2. Founding of ERGO Digital Ventures
3. Founding of ERGO International

**Our mission**

- Ensure successful execution of ERGO’s digital transformation
- **P&L responsible for >€1bn GWP online and direct sales in Germany¹**
- Driver of growth initiatives

**Framework and infrastructure – ERGO Digital Ventures**

- 8. Fundamental optimisation of product portfolio
- 9. Integrated offerings for hybrid customers
- 10. Solutions for pure online customers
- 11. Strengthening internat. comm./indust. business
- 13. International growth

¹ As at 31 December 2016 including ERGO Direkt.
Framework for digitalisation at ERGO

Enabling technology and digital innovation

- Improving existing business models
  - Starting with
- Disrupting existing business models
  - Starting with pure digital
- Establishing new business models
  - Starting with automotive

Digital culture – a new way of working and global exchange
The online market for insurances is growing strongly

Insurances – Online share

- Information
- Sales

Significant potential in online/offline link

Further growth potential in online sales

We aim at the modern customer and adapt in sales, retention and service

360-degree customer view
- We aim to further harmonise products (car, home, liability) and operations to meet our customers’ needs and expectations on all channels
- Usage of customer relationship management started in October, serving our first individualised cross-channel campaigns

Service
- We aim to provide Germany’s leading insurance customer self-service portal (measured in absolute number of logins)
- More than 620,000 registered users, annual growth rate 35%

The new agency
- 50% of ERGO.de’s web traffic induced from our agencies’ web sites
- We strive to become the leading website for tied agents in Germany

Empowering ERGO in online business
- We aim to make all main retail products attractive and available for sales on all channels (online, telephone, print, …)
- Conversion rates increased in health products by 22%
We empower ERGO to deliver best-in-class user experience by means of our new digital factory

ERGO Digital IT as part of ERGO’s global IT

~€140m (gross) planned investment 2017–2020 in customer-facing IT solutions for unrivaled costs per product

We live a new way of working

- Use greenfield approach where possible
- Agile projects – developed Multitool Life end-to-end in only three months

Success case

- Increase volume – Increase overall sales volume and number of policies concluded in car business by establishing new sales channel through OEMs
- Market penetration – Conclude cooperation with OEMs and strengthen market penetration for ERGO
- Sustained profitability – Aim to achieve sustained profitability of the ERGO brand
We focus and account for different maturities of innovation topics by using a hype-cycle logic.

Expectations

- Connected cars
- Genomics
- 3D scanning
- Drones
- Autonomous driving
- Smart factory
- Blockchain distributed ledgers
- AI underwriters

Innovation trigger

- Connected home
- 3D printing
- Sharing economy
- Telematics
- AI/bots
- IoT for B2B
- Peer-to-peer insurance
- Wearables
- Video interaction

Peak of inflated expectations

- Cyber security
- Big data & analytics
- Social media
- Mobile/ apps
- Web analytics
- CRM

Trough of disillusionment

- Connected home

Slope of enlightenment

- International knowledge exchange on mutual business

Plateau of productivity
Connected Home – ERGO Safe Home minimises and prevents damage for smart-home customers

Overview: ERGO Safe Home

- **Smart-home hub**
- **Fire**
- **Burglary**
- **Water**

Automated alert chain triggered by sensors with 24/7 emergency assistance

Deutsche Telekom cooperation

- **Product bundle of insurance, technology and service**
  - Sensor-based alarm system combined with household insurance and assistance service. Sensors detect incident and notify customer and assistance service partner for immediate relief.

- **Joint sales with Deutsche Telekom**
  - Sale of smart-home bundle via ERGO’s tied agents and sale of stand-alone assistance service via Telekom shops
We have established units and programmes to drive digitalisation from the edge
Reinsurance
Marcus Winter
Our innovation activities capitalise on major external trends

TECHNOLOGICAL SHIFTS – “INDUSTRY 4.0”

Sensors
Digitalisation
and automation

DIGITAL ECOSYSTEM

Digital Partners
Canadian multi-channel distribution

NEW TYPES OF RISKS
Cyber
“Hyperloop”

DATA & ANALYTICS
Data lake
Digitally augmented underwriting/claims
“Industry 4.0” provides us with the opportunity to access a huge market with new business models

- “Industry 4.0” provides access to significant new revenue streams and a new customer base
- Change of value proposition
  - Claims prevention vs. claims coverage
  - Assurance of outcome vs. insurance of risk
  - Provision of hardware (sensors/assets) and performance guarantee
Digital Ecosystem – We provide an attractive value proposition for players rethinking insurance delivery

- Providing digital backend systems beyond traditional underwriting/pricing support
- Offering value to different players servicing consumers with risk coverage
3. We have a longstanding tradition in insuring new types of risks.

Pushing the boundaries of technology: “Hyperloop”

Extend value proposition into services: Cyber

Leverage data analytics: Pandemics cover
Strong investment into data analytics allows us to extract value from internal and (new) external data sources.

TECHNOLOGY
State-of-the-art data analytics infrastructure “Munich Re Data Lake” in place – no legacy systems.

PEOPLE
Investment into decentral data analytics capabilities, >150 FTE with data science background across global organisation.

VALUE
Data scientists and business function teams partner to deliver cognitive computing and artificial intelligence across the value chain.
Our transformation: Agile, flexible, modular

Network of partnerships supplementing traditional linear value chain

Digital solutions designed for a modular environment

Innovation activities drive cultural change towards a flexible and agile mindset
We drive innovation in the industry

Unique positioning

- Global presence
- Financial strength
- Full range of monetisation options
- No IT legacy
- No channel conflicts

Unique mix of value propositions for our partners

- Domain expertise in underwriting, claims and risk management
- Efficient access to new solutions
- Strong brand and reputation
- Mutual trust
- Longevity of our offerings
Strategic investments in selected partnerships to leverage joint value creation potential

- >€60m invested into >10 assets focusing on InsurTech and IoT ecosystem
- Strategic intent is joint value creation and establishment of long-term partnerships
- We provide value – not only money: Start-ups seek access to domain expertise, clients and brand accreditation provided by Munich Re
From incremental innovation to leading-edge technology – Tangible success cases

- Expanding the boundaries of insurability
- Data-driven solutions
- Capital market solutions
- Canadian multi-channel distribution
- Digital Partners
- Reshuffling the value chain
- Drone coverages
- Augmented underwriting
- Epidemic solutions
- Data Analytics Suite
- Data lake
- Data-driven solutions
- Traditional reinsurance
- Insurance gap and financially motivated reinsurance
- M.I.N.D.
- IoT
- Cyber solutions
- AI
- Trends

Investor Day 2017
Data and analytics

Wolfgang Hauner
Data and analytics – Why, why now, and how?

Data volume is growing exponentially

New developments help to use full power of technologies

We enable our employees and customers to use enriched data, advanced tools and state-of-the-art analytics

Munich Re is leading in insurance-specific artificial intelligence (AI)

Data scientists and business-function teams partner to deliver cognitive computing and artificial intelligence across the value chain
Data and analytics supports Munich Re’s core strategic areas, serving as business enabler for the whole Group

Mission: Generate business value through data analytics for internal and external clients

<table>
<thead>
<tr>
<th>Data analytics</th>
<th>Portfolio analysis</th>
<th>Fee business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help to retain business by providing data analytics services</td>
<td>Generate more and better business, identify weak spots</td>
<td>Getting paid for services</td>
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</table>

**ERGO**
- Tariff optimisation
- Customer satisfaction
- Automated underwriting
- Loss-driver analysis
- Telematics

**DKV**
- Daily sick allowance
- Medical coding assistant (MOCA)
- Predictive underwriting
- Dental billing check

**MEAG**
- Predict interest rates
- Portfolio optimisation
- Sentiment analysis

- Churn
- Cross selling
- Loss-driver analysis
- IoT and telematics
- Supply chain monitoring
Data and analytics serves purposes along the (re)insurance value chain

Insurance value chain

DISTRIBUTION

AUTOMATED ADVISORY
- Complement face-to-face interaction
- Enable innovative distribution (e.g. P2P)
- Serve low-volume, high-frequency segment
- E.g. mass business in India

UNDERWRITING

AUTOMATED UNDERWRITING
- Leverage all data and resources
- Improve workflow and customer experience
- E.g. "The Box"

CLAIMS

VISUAL CLAIMS SUPPORT
- Enable fast response
- Obtain more detailed information
- Handle low-volume, high-frequency claims
- E.g. M.I.N.D

AI trends
Data and analytics in reinsurance

How it works in the reinsurance group

1. Collect data
2. Store, cluster and structure data
3. Analyse data
4. Add value

- Collect data:
  - Client/Portfolio data
  - Munich Re data
  - External data sources

- Store, cluster and structure data:
  - Data lake

- Analyse data:
  - Machine learning, AI, statistics
  - Solution:
    - Improve efficiency
    - Improve portfolio quality
    - Business generation

Image: used under license from shutterstock.com
1 Collect data: Combination of data with domain-specific expertise is key!
Munich Re Data Lake – The open enterprise approach for the reinsurance group globally

Data innovation

Reach highest level of data innovation by community-driven digitalisation
- Share data, knowledge and algorithms
- Very fast prototyping and innovation
- Easy access and self service

Time to digital market

Shorten time to insight and product by centralising and cataloguing
- Find data fast using a catalogue
- Clean, prepare and merge centrally
- Lots of horsepower

Service diversity

Layers of expertise, professionalism and enterprise readiness
- Service development in every layer of the value creation process
- Multi-dimensional customer base

SPEED UP AND SHORTEN PROCESSES
Munich Re Data Lake – Leading-edge infrastructure

Intelligent shortcut using best-in-class solutions to build a superior overall system

Cost-efficient implementation

- SAP HANA
- Hadoop and data lake tools
  - Alation, Jupyter, TRIFACTA, Spark, Hortonworks, Solr, Kafka
- HDFS file system
  - Long-term unstructured and structured data
  - Project folders, user folders, SAS autoload folders
- SAS LASR
  - Data for ad-hoc in-memory analytics

Existing HANAs
- Structured transactional business data
- Access to HANA

Analytics tools
- SAS Mobile BI
- Browser
- Terminal server
- MS Office Add-in

In-memory technology accelerates processes

Central storage facility

Data and analytics in reinsurance
## Turning data into value

**Platform open to every Munich Re employee**

- Dynamically visualise data of any size
- Get a quick and easy overview of data by using heatmaps, correlation matrices, etc.
- Predict outcomes based on certain explanatory factors
- Predict claimed amount per individual based on age, gender, disease, etc.

**Explorative analysis**
- Advanced visualisation techniques

**Multivariate effect analysis**
- Regression and machine learning models

**Advanced analytics**
- Predictive modelling
  - Regression and machine learning models
- AI, text mining, deep learning
  - Singular-value decomposition, NLP, neural networks

**Often initial focus on data extraction to be solved to enhance available data**

- Figure out how certain factors influence a target variable
- Influence of age, gender, disease, etc. on claimed amount
- Analyse large amounts of unstructured text, pictures, speech, …
- Extract key topics from claims reports, insurance-specific computer vision

**Support new developments, e.g. text mining (NLP) and telematics**

**Facilitates quick and in-depth analysis of problems**
Example: Risk assessment to improve efficiency – Digitally augmented underwriting: Tariffs using artificial intelligence

Tariffs are key – But hard, slow, and costly
- Experts using portfolio-specific data
- GLMs\(^1\) as state-of-the-art risk models
- Various individually estimated factors for tariff adjustment

**Munich Re**
- Additional external data
- Munich Re data and insights

**AI methods**
- ETL\(^2\)
- Model selection
- Fitting, tuning, evaluation

**Automatic and individual AI-based tariffs**
- Claims, tariff and contract data

**Primary insurance**
- Benefits
  - Speed/timeliness
  - Cost reduction
  - Improved risk selection

**Munich Re data and insights**
- Large repository of proprietary global risk data
- Access to high-quality external data sources
- Exceptional data science and domain expertise
- Cutting-edge data and artificial intelligence technology

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\(^1\) Generalised linear models. \(^2\) Extract, Transform, Load.
4 Example: Risk assessment to generate more business – Identify cross-selling potential for a client

Identify pools with high cross-selling potential

- Data collection and testing
- Machine learning
- Result clustering: Profit potential

Improve sales efficiency and profitability

- Improve transparency on existing customers, e.g.:
  - Clusters with high buying potential
  - Geocoded distribution of customers per insurance policy
  - Potential analysis per distribution channel
  - Efficient usage of sales force capabilities
  - Better customer relationship management
  - Swift deployment of service: complete analysis cycle can be done within 4–8 weeks
  - No system integration needed

Geocoded result visualisation

- Forecast insured’s policy type with 90% success ratio
- Identify customers with high potential to buy additional insurance by region

High potential to buy additional insurance

Source map: Munich Re
Cyber insurance
Daljitt Barn
Our approach

History

We have been writing cyber for over 10 years

Ambition

Munich Re would like 10% market share by the end of 2020

Growth

Organic through quota-share, plus white-label and primary markets

Resonance

Our heritage of managing complex risk whilst being innovative in the cyber market

Munich Re Syndicate Limited
Cyber insurance

Global trends

Cyber penetration in the US: ~20%
- Strong growth in certain industries:
  Manufacturing, transportation, life sciences, power and utilities
- Ransomware attacks in 2016:
  Increase of 100%–400%, making it the “year of the ransomware”
- More IoT-leveraged attacks in 2017, like the “Dyn event”
- Attacks on cloud services will be more prevalent, e.g. business interruption. We will therefore see more primary cyber policies being written

Cyber penetration in rest of world: <5%
- Lloyds have circa 60 syndicates writing cyber
- Strong growth predicted in EU for SME and growing markets in Asia, especially Japan
- Cedants wanting support from Munich Re (quota-share or facultative) to understand the gaps between writing SME and moving to industry
- Automated underwriting and MGA models key for distribution
Cyber incident – WannaCry
Executive summary

- Example of a ransomware worm that encrypts files on the compromised computer and demands a ransom payment for decryption (~US$ 300–600 paid in bitcoins)
- Attack has hit over 200,000 systems in 150 countries since 12 May 2017
- All Windows versions before Windows 10 are vulnerable to WannaCry if not patched for MS-17-010
- Finally WannaCry scans for other vulnerable Windows computers to spread very quickly

A turning point for cyber insurance?
- Raised awareness globally of this type of peril, i.e. it impacted people’s lives
- Did not impact cyber policies because of waiting periods, and with this and Petya, the ransom is below retention limits
- Business interruption is the more prevalent impact

Countries hit in initial hours of cyber-attack

*Map shows countries affected in first few hours of cyber-attack, according to Kaspersky Lab research, as well as Australia, Sweden and Norway, where incidents have been reported since

Source: Kaspersky Lab's Global Research & Analysis Team
Cyber insurance landscape – What do we think?

Current market size

~US$ 3.6bn
At the end of 2016

Global distribution of cyber

85%
US market by end 2016

Munich Re GWP in 2016

US$ 263m
38% growth (versus 26% market)

Size of the opportunity

US$ 8–10bn
By the end of 2020

EU growth

GDPR¹
Mandatory breach reporting for cyber

Munich Re low loss ratios

Profitable
For the class of business

¹ General Data Protection Regulation.
Cyber risk in the insurance industry – Cyber as a peril

- Rapidly evolving landscape
- Inhomogeneous
- Cyber crime is big business
- Risk quantification?
- Cyber past does not predict cyber future
## Implementing cyber security – Cyber as a control

<table>
<thead>
<tr>
<th>Budget and teams often aligned with IT</th>
<th>Risk mitigation focused</th>
<th>Security controls must work at all times</th>
<th>How much security is enough?</th>
<th>What is the RoI?</th>
</tr>
</thead>
</table>

- Budget and teams often aligned with IT
- Risk mitigation focused
- Security controls must work at all times
- How much security is enough?
- What is the RoI?
Cyber risk in the insurance industry – Cyber as a product

Coverage versus pace of change in technology

Managing the risk, and pricing accordingly

We’re in the risk management business

No quantum of cyber claims data

Accumulation

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Image: used under license from shutterstock.com
Image: Getty Images
Image: used under license from shutterstock.com
# Cyber risk in the insurance industry – Commonalties between the two worlds

<table>
<thead>
<tr>
<th>PERIL</th>
<th>PRODUCT</th>
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<tbody>
<tr>
<td>People</td>
<td>Lack of skilled cyber resources</td>
</tr>
<tr>
<td>Regulation</td>
<td>No mandatory breach notification outside US</td>
</tr>
<tr>
<td>Technology</td>
<td>Digitisation – connecting the old with the new</td>
</tr>
</tbody>
</table>

Confidence is increasing within our industry, but more work needs to be done on both sides.
Cyber (re)insurance market – Strong and long-term growth to be expected

Reinsurance: First-mover and global market leader
- Dynamic growth through joint projects with cedants
- Steady growth in the US
- Strong accumulation models

Primary insurance: Specialised single-risk taker
- Hartford Steam Boiler: Established player in the US for SMEs and individuals
- Corporate Insurance Partner: Focus on large corporate clients – Cooperation with IT providers, and Beazley

With our leading-edge expertise and strong global market presence, we will cautiously participate in the growth of this market segment

1 Estimates based on different external sources (Marsh & McLennan, Barbican Insurance, Allianz).
Cyber (re)insurance outlook – Significant expansion of coverage types possible

Increasing exposure and complexity of coverages

Cautious evolution of market offerings

**Already in the market**
- Loss or theft of data
  - Data destroyed or stolen; covered in private, commercial and industrial lines
- Privacy breach protection
- Cyber extortion
- Property damage
  - First- or third-party property damage resulting from a cyber event
- (Contingent) business interruption
  - BI/CBI resulting from a cyber event

**... first offerings**
- Product liability
  - Third-party property damage or bodily injury caused by software failure within a product
- Reputational damage
  - Loss of profits due to reputational damage as a result of a cyber event
- Loss of intellectual property
  - Loss of profits due to stolen trade secrets, or other commercially sensitive information

**... not yet**
- Loss of intellectual property
- Consumer data stolen or lost, or non-compliance with privacy legislation by a company
- Threat of loss or destruction of own or customer data
Munich Re cyber accumulation scenarios – Overview

<table>
<thead>
<tr>
<th>Accumulation scenario</th>
<th>Self-reproducing IT viruses</th>
<th>Data breach</th>
<th>Corrupted software in core module</th>
<th>Failure of external networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Untargeted cyber attack on multiple computer systems</td>
<td>Many insureds affected (exploit of common vulnerability by hackers)</td>
<td>Randomly falsified data over a longer period of time</td>
<td>Includes power outage and internet outage</td>
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<tr>
<td></td>
<td>Large number of systems infected by one event</td>
<td>Top-down PML estimate for breach of cloud service provider in 2014</td>
<td>Data compromise across multiple clients and industries</td>
<td>Property damage, BI/CBI and liability losses</td>
</tr>
<tr>
<td></td>
<td>First-party business interruption and data losses</td>
<td>Privacy breach and cyber liability, cyber extortion</td>
<td>Business interruption and data losses</td>
<td></td>
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</tbody>
</table>

Munich Re risk management

<table>
<thead>
<tr>
<th>Description</th>
<th>PML calculation model and guideline in place since 2012</th>
<th>Monitoring of limits of exposed (cyber) participations</th>
<th>Lower top-down PML assessment as compared to other scenarios</th>
<th>High loss potential</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular revision of model parameters (2015, 2016)</td>
<td>Probabilistic PML model under development and to be implemented in 2017</td>
<td>No bottom-up PML methodology required</td>
<td>Mandatory exclusion for cyber/IT coverages</td>
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<td></td>
<td>Internet outage scenarios are currently investigated</td>
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<td>Monitoring of full limits in case of dispensations</td>
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Cyber insurance underwriting guidelines covered systems and networks

Insured’s computer system:
- Internal computer systems under the operation or direct control of the insured

Cloud computing (SaaS, PaaS, IaaS)
- E-mail service provider
- Web-hosting provider
- Cloud provider

To be excluded
Failure of:
1. Electricity supply networks,
2. Telecommunication networks, including the internet

Internet services:
- Internet service provider (ISP)
- DNS service provider
- Internet exchange provider

Can be covered as IT outsourcing provider
Munich Re’s value-add – Where can we offer support?

Experience and expertise
We bring well-established experience to the table with experts who can operate in all industries and organisations, from large corporates to SMEs and personal lines.

Continuous improvement
We continuously monitor changes to the cyber environment, seek to improve our understanding of the risk, and then adapt our cyber products to ensure we remain relevant to our customers.

Innovation
We are actively identifying and developing cyber initiatives to improve our customers’ experience and enhance underwriting.

Images: used under license from shutterstock.com
Canadian multi-channel distribution
Mary Forrest
Munich Re Canada Life at a glance

Munich Re is a premium reinsurer in the Canadian life market and the biggest mortality risk carrier

Individual life reinsurance market

- Peer 5: 6%
- Peer 4: 10%
- Peer 3: 13%
- Peer 2: 18%

Total sum insured: Can$ 160bn

Group reinsurance market

- Peer 1: 27%
- Other: 9%
- Peer 2: 4%
- Peer 3: 10%
- Peer 5: 6%

Total GWP: Can$ 0.8bn

Market becoming more competitive

Based on our strong market position, we are exploring new opportunities to grow a currently saturated market

2 Share by premium in 2016, based on traditional group only. Source: OSFI.
What will we achieve?

- Open an untapped market
- Enlarge product offering for clients
- Develop a new revenue stream
Canadian multi-channel distribution

Canadian group benefits market

$40 billion
Market

35 million
Canadians

20 million
Mandatory insureds

2–3%
Voluntary insureds
# What is our innovation strategy?

## MANDATE
Solve problems that are plaguing our industry by developing turnkey solutions we can bring to our partners to drive reinsurance reach and growth

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>GUIDING PRINCIPLES</th>
<th>STRATEGIC OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengthy policy underwriting timelines</td>
<td>SPEED TO MARKET</td>
<td>Become one of Canada’s largest group insurance consolidators</td>
</tr>
<tr>
<td>Policy behaviour and meeting customer product needs</td>
<td>COST EFFECTIVE</td>
<td>Develop an end-to-end technology platform</td>
</tr>
<tr>
<td>Claims adjudication complexity</td>
<td>MODULAR</td>
<td>Create a multi-channel distribution network</td>
</tr>
<tr>
<td>Wellness and living a healthy life</td>
<td>OWN THE IDEA</td>
<td>Establish a preferred partner network</td>
</tr>
<tr>
<td>Overall poor customer experience</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our innovation strategy is creating value for all “players” in the insurance sales chain

MEMBER

- Improve the user experience by making it EASIER to buy insurance with IMMEDIATE FULLFILMENT

SPONSOR

- Create a platform that IMPROVES BENEFITS for my employees and makes ON-BOARDING EFFORTLESS

BROKER

- Creates a NEW stream of REVENUE for existing clients with LOW EFFORT for the customer’s lifetime

CARRIER

- A way to sell new insurance products that is LOW EFFORT, COST EFFECTIVE and QUICK TIME TO MARKET
Video
A customer-centric platform that allows the customer to research, buy and manage their insurance products and investments.

**THE SOLUTION**

- **LIFE** Insurance
- **P-C** Insurance
- **CRITICAL** Illness
- **HEALTH** Insurance
- **WEALTH** Management
- **FUTURE** Products

- One platform
- Multiple products
- Any brand

Munich Re core expertise

External partnerships

Canadian multi-channel distribution
The platform handles all aspects of the insurance sales cycle creating a “Virtual Insurance Company” …

THE SOLUTION

Combining the platform with Munich Re partners can provide a complete, turnkey insurance solution for any company or brand.
Canadian multi-channel distribution

… while improving customer experience and convenience

THE SOLUTION

Quick access to all products and services
Insurance | Investment | Vitality

A live feed of all activity around products including ALERTS, PAYMENT, PURCHASES and CLAIM STATUS

Payment and renewal reminders to encourage accounts in good standing

Claim status and submission

Upsell and cross-sell product suggestions based on customer behaviour and life stage

Bundling and discounting to drive loyalty and engagement
We are creating a modular platform that allows any brand to participate, leveraging the Munich Re partner network.
With our platform and DIGITAL AGENCY we can work with ANY CARRIER, ANY BROKER and ANY BRAND

Munich Re has created a DIGITAL INSURANCE agency

We can work with ANY CARRIER, ANY BROKER or ANY BRAND to create a branded end-to-end experience

We provide and manage all aspects of the insurance process including:

Marketing                  Administration
Customer service           Payment and billing
Adjudication               Policy issue
Our platform and innovation strategy will help us become an even larger player in the Canadian insurance space

Objectives

**Manage Can$ 1.6bn in Group insurance premium** within the next 5 years

**Generate earnings via reinsurance, distribution and administration fees**

**Become a significant and relevant player in the Group insurance** market in Canada by helping our partners expand the current market by providing leading-edge tech, distribution and product solutions to our clients, partners and stakeholders
We have seen early success in our controlled critical illness pilot, running since January 2017.

<table>
<thead>
<tr>
<th></th>
<th>FORECAST</th>
<th>ACTUAL RESULTS</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONVERSION RATE</strong></td>
<td>3%</td>
<td>35%</td>
<td>+1,100%</td>
</tr>
<tr>
<td>Canadians purchase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voluntary benefits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ANNUAL PREMIUM</strong></td>
<td>Can$ 150</td>
<td>Can$ 250</td>
<td>+66%</td>
</tr>
<tr>
<td>Munich Re forecast for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average annual premium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ENROLMENT</strong></td>
<td>30 days</td>
<td>2 days</td>
<td>−28 days</td>
</tr>
<tr>
<td>Average enrolment time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our strategy provides significant benefits for Munich Re

- Administration fees
- New insurance premiums
- Minimum 50/50 reinsurance
- Deeper relationships with clients
- New partners
- Data warehouse

Canadian multi-channel distribution
ERGO Mobility Solutions
Mobilising growth as strategic partner of the automotive/mobility industry
Karsten Crede
ERGO Mobility Solutions (EMS) entering the B2B2C automotive segment

### History
- Founded in January 2017 as strategic response to future automotive and insurance mobility opportunities
- Originated from ERGO Strategy Programme (ESP)
- Strong mandate regarding governance, infrastructure and investments

### Team
- Dedicated team with automotive and insurance experience
- Integrated teams between ERGO and Munich Re
- Leveraging diverse assets and expertise of Munich Re/ERGO Group

### Strategy
- Positioned as strategic/international partner of the automotive industry
- Collaboration as core value in a B2B2C business model
- Expertise along automotive and insurance value chain
- EMS with comprehensive key account function to the automotive industry
Motor insurance with its majority market share also remains the strongest growth driver

German P-C market share per line of business
% 2016; 5-year growth trend

- Private property: 15
- Other: 6
- Legal protection: 5
- Accident: 10
- Liability: 12

Non-private property: 13

Motor dominating segment with total GWP of ~€25.9bn in 2016

German motor insurance market per sales channel
% 2015; 5-year growth trend

- Other: 7
- Agents: 42
- Direct: 39
- Brokers: 18
- Aggregators: 15
- OEM/Dealer: 8

Automotive channel stagnates, but strong replacement potential of non-strategic players – “second source approach”
- Online and direct providers are winning market shares

Motor is the combustion engine of the insurance industry

Source: KPMG; GDV, ERGO Mobility Solutions
Challenging environment for both industries – Automotive and insurance

Automotive industry trends
- Connected cars
- Autonomous driving
- Sharing economy
- Electric vehicles
- “Using”, not “owning”
- Peace-of-mind offerings
- (Intermodal) mobility solutions
- Massive investment efforts needed
- Challenging political social conditions
- Environmental issues (NOX)
- Dependency on few growth markets

Insurance industry trends
- Internet of Things
- Artificial intelligence
- Legacy IT
- Data analytics
- Low-cost products
- Seamless processes
- Omnichannel
- Flexible and easy coverage
- Stressed profit pools
- Low interest rates
- Low growth in mature markets
- Weak infrastructure in growth markets

Technological evolution

Customer demand

Market environment
However, significant interdependency between insurance and automotive core profit pools

Expected profit pools 2025 – Automotive, global, without inflation

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (€bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>373</td>
</tr>
<tr>
<td>Automotive sales (new and used)</td>
<td>26</td>
</tr>
<tr>
<td>Financial services</td>
<td>138</td>
</tr>
<tr>
<td>After-sales</td>
<td>151</td>
</tr>
<tr>
<td>Mobility/connectivity</td>
<td>58</td>
</tr>
</tbody>
</table>

Complementary to automotive profit pools

1 Motor, payment protection/GAP/warranty, Source: Oliver Wyman, Ritzenhoefer & Company research
Becoming an integrated player in the mobility ecosystem

Evolving from traditional motor insurance provider … … to become an integrated player in mobility ecosystem(s)

ERGO value contribution to OEMs/mobility providers

- Reduce total cost of mobility (TCM)
- Support penetration of new mobility concepts
- Optimise aftersales revenue
- Increase customer retention
- Increase financial products penetration
- Stem investments as strategic co-investor

Connected car

Smart vehicle

Vehicle

Mobility ecosystem

- Mobility as a service
- Inter-modal concepts
- Big data/telematics
- Virtual assistant
- Usage-based insurance
- Autonomous driving
- Motor and ancillary products
- Car sharing
- Ride sharing

ERGO Mobility Solutions

Images: used under license from fotolia.com. Source: ERGO Mobility Solutions
EMS to add value along the entire mobility value chain

Selective measures along automotive value chain

**Research and development**
- ADAS\(^1\) effectiveness research
- Level III + IV autonomy insurance principles
- Battery (guarantee) research

**Production and IT**
- Dedicated IT platform
- Data management

**Sales and marketing**
- ADAS\(^1\) product bundling
- Electric car/battery covers
- Support used-car strategy

**Dealer network**
- Omnichannel distribution
- Few-click digital solutions

**Financial services**
- Non-asset-based business
- Bundled packages

**After-sales**
- After-sales claims concepts
- Life-cycle management

**Mobility**
- Support car sharing
- Mobility as a service

---

\(^1\) ADAS = Advanced Driver Assistance Systems. Source: ERGO Mobility Solutions
Using R&D partnerships to develop innovative product offerings

EXAMPLE 1

- E-MOBILITY
- CYBER SECURITY PROTECTION
- CONNECTIVITY SERVICES
- AFTER-SALES
- ADAS EFFECTIVENESS

R&D partnership with Ford

Images: used under license from Ford
After-sales/claims management concepts help all parties to stabilise profit pools and increase customer satisfaction.

**OEM**
- Increase parts turnover and contribution margin
- Stabilisation of own repair shop network
- Secure customer contact/customer satisfaction

**Repair Shop**
- Additional service utilisation
- Improved contribution margin
- Customer acquisition/upselling potential

**Customer**
- Higher repair quality
- Higher residual value
- Increased satisfaction

**ERGO**
- Reduced claims costs: Hourly rates and parts
- Defined cost frame
- Customer satisfaction and loyalty
Building strong base capabilities and competitive edge

Strategic pillars of ERGO Mobility Solutions

**Growth**

**Digitalisation**

**Technical excellence**

**Collaboration**

---

**Differentiators**

- Automotive insights
- Omni-sales approach
- Advanced data management
- Digitalised core processes
- Low-cost capabilities
- Bargaining power and claims steering
- Collaboration approach

**Customer groups**

- OEM
- Dealer groups
- Intermediaries
- End customer

**Base capabilities**

- Comprehensive/competitive product/service offer
- Dedicated IT/operations
- International footprint
Joining forces internally between Munich Re and ERGO to create unique expertise

- Interlocked business model mobilises the diverse assets and entire expertise of Munich Re/ERGO Group
- International reach and market knowledge of particular importance for successful expansion
- Open up all sustainable business opportunities and optimise business mix
Dedicated IT platform as differentiator with flexible customer front-ends

Key characteristics

Customer and dealer interaction
- Appealing user interfaces
- “Agile development” approach

System of record (single truth)
- High-quality delivery of standard business processes, incl.
  - Pricing
  - Contractual changes
  - Printing
  - Billing
- “Stick to standard” approach

Main benefits

Simple, innovative add-on features
Short time-to-market
Intuitive modern usability
Low-cost system integration
Effective analytics and forecasting
Optimised processes

Highly flexible interaction front-end ...

... based on stable, well-proven and standardised back-end
Exploiting digitalisation potential and improving the customer experience

Customer journey

Digital touchpoints

Digital/digitalised services (exemplary)
Leveraging advanced data management to provide essential customer value via new services and products

Advanced Data Management integration [exemplary]

Connected Customer

Claims data

Electric cars

(Semi)-automated cars

Connected car

Accident data, first notice of loss, ...

Battery usage (charging, ...)

ADAS¹ system operating data

Trip data/driving style

EXAMPLES

Contextual enrichment of driving style

Targeted product/modules via customer insights

Machine learning regarding ADAS¹ effectiveness

Intelligent product offering based on geodata

¹ Advanced Driver Assistance Systems
Intelligent business models to optimise strategic fit with automotive industry

- Business development/sales cooperation
- Development cooperation
- Strategic cooperation primary insurance
- Joint financial services
- Mobility service provider
- Reinsurance/retrocession
- Joint risk carrier
Germany, China, and India as anchor markets and innovation hubs will be pursued first.

EMS wave I markets

Key characteristics

- One of the top 4 automobile manufacturers in the world
- Growing popularity of shared mobility
- Exemplary developed market
- 29% of total car sales worldwide
- Globally sizeable Chinese OEMs (SAIC #4 globally)
- Profitable motor insurance market
- High growth rates in both new and especially used car sales
- Exceedingly profitable motor insurance business

Car sales

- Germany:
  - 2014: 3.4
  - 2015: 3.5
  - 2016: 3.7

- China:
  - 2014: 23.5
  - 2015: 24.6
  - 2016: 28.0

- India:
  - 2014: 3.2
  - 2015: 3.4
  - 2016: 3.7

Market potential

- Main market for new mobility
- Demand for new corporate mobility solutions
- Testing ground for innovations
- E-mobility lead market
- Future global innovation hub
- Growing shared mobility market
- ~10% sales growth until 2020
- Growing online sales channel
- Large number of uninsured cars

1 Other key markets to be covered by partners. 2 Sales of new vehicles; source: Organisation Internationale des Constructeurs d’Automobiles (OICA).
Strategic milestones to achieving ambitious growth targets

2018 ONWARDS
- Establish core business
  - First-stage collaborations
  - Build up infrastructure
  - Achieve low-cost capability

2019 ONWARDS
- Extend core business
  - Second-stage collaborations
  - Increase profit pools
  - Leverage scales and synergies

2020 ONWARDS
- Extend business model
  - Extend value chain
  - Enter new partnerships
  - Offer additional mobility services

Winning strategic partnerships to mobilise growth
Digitalisation as a “must-do” to master high-volume, low-value policies in India
Ritesh Kumar
Introduction to HDFC ERGO (India) – Joint venture of HDFC (51%) and ERGO (49%)

Gross written premium\textsuperscript{1,2,3}\n
\begin{tabular}{|c|c|c|}
\hline
FY2008 & 34 & €m \\
\hline
FY2013 & 334 & \textsuperscript{2} \\
\hline
FY2017 & \textsuperscript{1} & 839 \\
\hline
\end{tabular}

\textbf{CAGR} ~44% \textbf{Net income}\textsuperscript{1,2,3}

\begin{tabular}{|c|c|c|}
\hline
FY2008 & 1,2,3 & €m \\
\hline
FY2013 & 21 & \textsuperscript{2} \\
\hline
FY2017 & 38 & \textsuperscript{3} \\
\hline
\end{tabular}

\textsuperscript{1} FY2017 stands for period from April 1, 2016 to March 31, 2017 and likewise for other financial years. \textsuperscript{2} Figures for HDFC ERGO for FY2017 include HDFC General. \textsuperscript{3} €1 = INR 75. \textsuperscript{4} Source: General Insurance Council.

Product mix, FY2017 (FY2008)\textsuperscript{1,2,4}

\begin{tabular}{|c|c|}
\hline
\textbf{Segment} & \textbf{FY2017} \\
\hline
Other & 6 (12) \\
Crop & 33 (0) \\
Fire/engineering & 11 (9) \\
\hline
\end{tabular}

\begin{tabular}{|c|c|}
\hline
\textbf{Segment} & \textbf{FY2008} \\
\hline
Motor own damage & 17 (51) \\
Motor third-party liability & 12 (14) \\
Accident/health & 21 (14) \\
\hline
\end{tabular}

Market share of leading private-sector insurers\textsuperscript{1,2,4,5}

\begin{tabular}{|c|c|c|}
\hline
\textbf{Insurance} & \textbf{FY2017} & \textbf{FY2008} \\
\hline
ICICI Lombard & 8.4 & 11.3 \\
Bajaj Allianz & 6.0 & 8.1 \\
HDFC ERGO & 4.9 & \textsuperscript{3} \\
IFFCO Tokio & 4.4 & 4.4 \\
TATA AIG & 3.3 & 2.7 \\
\hline
\end{tabular}

\textsuperscript{5} Source: General Insurance Council.
India – Favourable demographics and increasing internet access through smartphone

Growing young population¹,² …

- Youth population (15–34 years) in m¹

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>32%</td>
<td>34%</td>
<td>34%</td>
<td>35%</td>
<td>432</td>
<td>477</td>
</tr>
</tbody>
</table>

- % Share of total population

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017e</th>
<th>2018e</th>
<th>2020e</th>
<th>2030e</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>76</td>
<td>123</td>
<td>204</td>
<td>300</td>
<td>340</td>
<td>369</td>
<td>402</td>
<td>1,200</td>
</tr>
</tbody>
</table>

By 2020, the average age of Indians is expected to be 29 years vs. 37 for China, 38 for USA and 47 for Germany³

... with high internet connectivity, esp. smartphones

- Smartphone utilisation (m)⁴

- % of internet accessed via mobile⁵

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017e</th>
<th>2018e</th>
<th>2020e</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>54%</td>
<td>57%</td>
<td>76%</td>
<td>90%</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

India has the second-biggest smartphone user base after China and ahead of US⁴

¹ Source: The World Bank DataBank, population estimates and projections.
⁵ Internet and Mobile Association of India, IMRB Research.
Non-life market in India – Strong need for digitalisation for cost-efficient delivery of products and services

Gross premium\(^1,2,3,4,5\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Premium (€bn)</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2008</td>
<td>4</td>
<td>~18%</td>
</tr>
<tr>
<td>FY2013</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>FY2017</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>FY2025e</td>
<td>56</td>
<td>~15%</td>
</tr>
</tbody>
</table>

Non-life penetration, 2017 (% of GDP)\(^6\)

- World: 2.8
- Asia: 1.9
- India: 0.8
- Rural India: 0.2

No. of policies (m) and average ticket size (€)\(^1,2,3,4\)

<table>
<thead>
<tr>
<th>Year</th>
<th>NOP (m)</th>
<th>Ticket Size (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2008</td>
<td>57m</td>
<td>€69</td>
</tr>
<tr>
<td>FY2013</td>
<td>109m</td>
<td>€86</td>
</tr>
<tr>
<td>FY2017</td>
<td>161m</td>
<td>€111</td>
</tr>
</tbody>
</table>

- High-volume, low-value business with significant growth potential
- Overall low penetration, much lower in rural India and low-value segments

Given higher cost of policy issuance via manual mode, digital mode is critical to improve viability of small-ticket business

---

1 FY2017 stands for period from 1 April 2016 to 31 March 2017 and likewise for other financial years. 2 Figures for HDFC ERGO for FY2017 include HDFC General. 3 €1 = INR 75. 4 Source: General Insurance Council. 5 Source: McKinsey. 6 Source: Munich Re Economic Research, FICCI – India General Insurance “Improving penetration and driving market creation”.
HDFC ERGO has achieved multifold increase in scale of operations and pan-India reach by embracing digitalisation.

HDFC ERGO’s wide reach …
~30,000 locations across
~5,000 cities and villages

... despite limited physical presence of
112 branches offices and 100 virtual offices

Scale of operation
- Issuing ~12 policies per min
- Servicing ~1 claim per min
- Handling ~2 incoming calls per minute, across 10 languages

Delivering excellence by focusing on
- Quality of offering
- Speed of response
- Better engagement
Using digital technologies to drive efficiencies

Key operating levers

1. **Automation**
   - Maximising Straight-through processing

2. **Mobile-first architecture**
   - Increasing convenience for customers and sales forces

3. **Self-service**
   - Consistency across channels

4. **Predictive analytics**
   - Improving portfolio quality and identifying growth potential

5. **Digital innovations**
   - Exploring emerging technologies (RPA¹, chatbots, voice)

---

¹ RPA: Robotic process automation.
Automation – Plug and play architecture facilitating straight-through processing (STP) to drive efficiencies

Mass customisation in India

Agile digital platform cater to all customer segments with different buying behaviour across:
- banks and financial institutions,
- agents and brokers,
- OEMs,
- online and web aggregators.

Having no legacy issues positions us well for hybrid customers.

Distribution mix, FY2017 (FY 2008)\(^1,2\)

<table>
<thead>
<tr>
<th>Segment</th>
<th>FY2009</th>
<th>FY2012</th>
<th>FY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>2.8</td>
<td>2.3</td>
<td>4.9</td>
</tr>
<tr>
<td>Online</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Agency</td>
<td>17 (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bankassurance</td>
<td>19 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokers</td>
<td>19 (22)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

87% of policies issued in straight-through process ...

... incl. 1m digital policies (online sales and renewals)

FY2009 FY2012 FY2017

1 FY2017 stands for period from 1 April 2016 to 31 March 2017 and likewise for other financial years.
2 Figures for HDFC ERGO for FY2017 include HDFC General.
Mobile-first architecture – A host of feature-rich mobile apps digitally enable distribution, customer service and claims

Sales force
- Sales portal
- Point of sale on mobile
- Micro insurance
  - Office in a bag (crop, cattle)

Partners
- Agency management system

Customers
- Insurance Portfolio Organiser (IPO)
- IPO on Apple Watch

Claims field force
- Motor claims survey
- Motor pre-inspection
- Microinsurance
  - Crop survey

Community
- Customer discussion forum

Insurance Portfolio Organiser app
Motor claims survey app
Video
3 Self-service –
Digital service model for new-age customers

12% of requests serviced in self-service mode¹

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2%</th>
<th>4%</th>
<th>6%</th>
<th>9%</th>
<th>12%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4FY16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1FY17</td>
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</tr>
<tr>
<td>Q2FY17</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Q3FY17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4FY17</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Example of self-service features on our website

- E-Mail Policy
- Tax Certificate for Health Insurance
- Update Contact Details
- Make Changes
- Transfer of Insurance – Motor
- Create Service Request
- Upload Document
- Cancellation of Policy
- Track Interaction Status
- Claim Status

Mass customisation in India

¹ In % of total requests. Interactive Voice Response (IVR) and mobile, website using one-time password mechanism, no need to login
Predictive analytics helping in portfolio steering, optimising sales campaigns and fraud control

Portfolio steering to drive profitability
- Predictive models to estimate the impact of various decisions on performance
- Scenario-analysis-based portfolio steering

Customer analytics for renewal and cross-selling
- Predictive model to improve motor renewal performance
- Up-sell/cross-sell targeted campaigns

Analytics-based fraud control engines
Comprehensive measures supported by
- Predictive analytics engine for health and motor
- Integrated workflow
- Social analytics tool

Estimated loss ratios (ELR) for motor

Target intervention on bottom 3 deciles for renewal

<table>
<thead>
<tr>
<th>Month</th>
<th>Total ELR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>April '16</td>
<td>39</td>
</tr>
<tr>
<td>Apr '16</td>
<td>49</td>
</tr>
<tr>
<td>May '16</td>
<td>62</td>
</tr>
<tr>
<td>Jun '16</td>
<td>72</td>
</tr>
<tr>
<td>Jul '16</td>
<td>57</td>
</tr>
<tr>
<td>Aug '16</td>
<td>53%</td>
</tr>
<tr>
<td>Sep '16</td>
<td>57%</td>
</tr>
<tr>
<td>Oct '16</td>
<td>62%</td>
</tr>
<tr>
<td>Nov '16</td>
<td>57%</td>
</tr>
<tr>
<td>Dec '16</td>
<td>69%</td>
</tr>
<tr>
<td>Jan '17</td>
<td>53%</td>
</tr>
<tr>
<td>Feb '17</td>
<td>44</td>
</tr>
<tr>
<td>Mar '17</td>
<td>44</td>
</tr>
</tbody>
</table>

Target intervention on bottom 3 deciles for renewal

- Decile 8 to 10
- Decile 4-7
- Decile 1-3
Digital innovation – Continuously striving to improve customer engagement and drive growth

Chatbot “Aby”
- Helping call-centre agents address customer calls effectively
- Initial results on select scenarios
  - ~8,500 requests assisted by Aby in two and a half months
  - 18% reduction seen in average call time
- Better consistency in customer response across floor

Robotics
- RPA \(^1\) Rambo implemented to automate manual processes and achieve operational efficiencies
  - Initial results on select scenarios
    - ~260,000 transactions processed in two months
    - 87% reduction in transaction processing time

Voice analytics
- Voice analytics of calls to generate insights on call-centre performance
- Customer insights, business issues and improve contact centre performance
- Targeted coaching for agents by analysing their performance

Continuously exploring and piloting emerging technologies like robotics, chatbots, voice analytics

---

\(^1\) RPA – Robotics Process Automation. Images: used under license from shutterstock.com
Internet of Things
Greg Barats
Introduction to Hartford Steam Boiler (HSB) – Market leader for equipment breakdown in North America

<table>
<thead>
<tr>
<th>GWP</th>
<th>US$ m</th>
<th>Combined ratio</th>
<th>%</th>
<th>Technical result</th>
<th>US$ m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1,013</td>
<td>84.7</td>
<td></td>
<td>146</td>
<td>92</td>
</tr>
<tr>
<td>2015</td>
<td>1,089</td>
<td>83.1</td>
<td></td>
<td>173</td>
<td>161</td>
</tr>
<tr>
<td>2016</td>
<td>1,113</td>
<td>85.3</td>
<td></td>
<td>161</td>
<td></td>
</tr>
</tbody>
</table>

HSB – Key facts

- Founded in 1866: “the first company in America devoted primarily to industrial safety”
- Global fee engineering presence and the largest authorised inspection agency for its niche
- More than half of 2,500 employees are engineers, inspectors and technicians
- Established HSB Strategic Corporate Ventures in 2014, funded with $50m to invest in emerging technologies

Engineering services, both packaged with insurance and directly for a fee, are significant differentiators for HSB
Specialty solutions for emerging risks globally –
With 20% GWP from innovative specialty products in 2016

Gross revenues

Fee engineering services¹
13%

Specialty products¹
18%

US$ 1.28bn
GWP plus fee revenue

69%

Commercial and industrial equipment breakdown and engineering lines

Product and services inventory

Commercial/industrial equipment breakdown
Full suite of engineered lines
Specialty energy
Machinery inherent defects coverage
Cyber and privacy
Specialty liability
Farmowners’ equipment breakdown (EB)
Homeowners’ EB and service line
Pressure vessel inspections
Management consulting: industrial/energy
Benchmarking: energy
Property inspections
ISO certifications

Recent highlights

Power generation uptime insurance

Internet of Things advisory services
IoT stack, machine learning, AI

CAGR 2012 to 2016

2.9

22.0

–1.7

¹ Indicates anticipated growth areas.

Investor Day 2017
HSB leads the Munich Re IoT strategy

Global team driving IoT for Munich Re
- 70 FTEs (60% of these resources came from outside HSB/Munich Re for technical expertise and/or software development skills)
- Commercial/Industrial focus (from SME to Industry 4.0)
- Pursuing both retrofit and integrated IoT solutions
- Testing technologies, platforms, business models and partners, customer experience, cost-benefit outcomes and more
- Coordinated ecosystem development

Globate mandate to drive IoT strategy for Munich Re (Group)
IoT: The interconnection (via the internet) of computing devices embedded in everyday objects, enabling them to send and receive data

IoT creates massive opportunity …

Estimates of global IoT economic impact

- US$11.1tn by 2025 (McKinsey)
- US$14.2tn by 2030 (Accenture)

… and new revenue sources

Estimates of IoT revenue from hardware, software, services

- US$470bn by 2020 (Bain)
- US$344bn by 2020 (AT Kearney)
- €250bn by 2020 (BCG)

Manufacturing and industrial applications offer the biggest early opportunity

- US$151bn Industrial IoT market by 2020
- US$124bn total Industrial IoT market by 2021

Industrial IoT technologies enable and enhance the delivery of key business outcomes …

- Reduced downtime
- Increased productivity
- Improved quality
- Lower costs
- Higher flexibility

… and the insurable risk landscape will be modified by IoT activities

Customer transformations will provide opportunities for increased efficiencies, production and new revenue streams

Insurance will transform by expanding beyond traditional coverages

New IoT-based financial products $

Assuring business outcomes from IoT investments
- Providing warranties and other vehicles to assure that positive business outcomes from IoT implementations are achieved

New or enhanced cyber for IoT
- IoT installations create new risks of “smart” devices being accessed, attacked or exploited
- New insurance products designed to manage unique IoT-based exposures

New IoT-enabled services
- IoT monitoring
- Uptime management
- Efficiency and optimisation
- Performance insights and anomaly detection
- Risk management
- Repairs optimisation

Traditional insurance premiums will shrink as increased customer-data access and risk understanding drive expectations of better (lower) pricing and/or demand to buy insurance only for specific risks or a limited duration
SME example: IoT drives strategic and bottom-line results for insurer

<table>
<thead>
<tr>
<th>Problem</th>
<th>Goals</th>
<th>Approach</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large claims due to burst pipes in houses of worship they insured; venues often unoccupied during periods of the week</td>
<td>Lower frequency Using temperature sensors on key water pipes, remotely monitoring water temperature; sends alerts and instructions to locations of at-risk areas</td>
<td>Proof of concept 20 churches – In a single winter, it helped avert 100% of probable freeze losses</td>
<td>Phased approach allowed client insurer to understand the programme and implications for roll-out</td>
</tr>
<tr>
<td>Need to differentiate and increase value proposition</td>
<td>Lower severity Water sensors were placed in potential exposure areas of a building; limiting leaks quickly means that there is less water damage and cleanup, and smaller losses</td>
<td>Pilot Expanded to 250 churches the following winter, averted numerous losses</td>
<td>Mobile platform provides opportunity to have different conversation with customer</td>
</tr>
<tr>
<td></td>
<td>Reverse trend toward commodity pricing</td>
<td>Production 10,000 churches scheduled over three years (to date, 4,000 churches enrolled)</td>
<td>Client insurer pays cost of equipment and monthly monitoring fee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Developed algorithms specific to exposures</td>
<td>HSB provides warranty on exposures, where appropriate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>To date, the programme has averted losses exceeding its cost</td>
</tr>
</tbody>
</table>
Example: Projected IoT technology impact on manufacturing

Real-time production dashboards
Remotely monitor, optimise, and control production – better visibility, faster decision-making and improved yields

Production and supply-chain optimisation
Continuous remote monitoring of people, practices and equipment\(^2\). Real-time data from suppliers.

Auto-sensing equipment
Equipment settings are self-adjusted based on ambient conditions and product being made

Self-directed vehicles
Intra-factory transportation path and priority optimisation

Condition-based maintenance
Sensors continuously monitor machine health, predictively scheduling maintenance and reducing unscheduled downtime

Automatic quality control
Based on sample specification – and provides support for regulatory reporting

Health and safety
Sensors preemptively alert and react to hazards (worker too close to machinery, for example)

Possible IoT use cases in factories

---

1 SOURCE: McKinsey Global Institute analysis. 2 Inventory, tool status, machine utilisation, and repairs.
HSB/Munich Re has significant market opportunity

**HSB/Munich Re competitive advantage for IoT**

Complex **financial and insurance** capabilities

Sophisticated **data analytics**

**Occupancy** knowledge and failure data

**Services** are a core capability

**Engineering**-based technical insights

**Equipment** is a competitive advantage

**Ecosystem** integration into solutions

**Importance of pursuing IoT strategy**

- Software and technology will play an increasingly larger role in our everyday lives and our customers’ businesses
- Technology will change the behaviour of our customers and associated risk exposures
- Our business solutions need to have an expanding technology component to position ourselves for success in the future, HSB/Munich Re are leveraging technology partners
- Our strategy gives HSB/Munich Re and its clients the ability to add new diversified service-revenue streams and profit pools as well as a clear advantage on writing emerging exposures

Greatest opportunities for companies that can combine technology capabilities and domain knowledge with risk management
IoT presents a long-term strategy that began four years ago with practical experimentation and ecosystem development.

17,800 sensors deployed
5,900 locations, 13,000 additional locations scheduled
58 alerting algorithms from concept to production stage
16 SME occupancies installed

Numerous SME applications available

Multiple Industry 4.0 market approaches being tested

4 IoT investments: Augury, Helium, Relayr, Waygum
1 pending (AI)
1 IoT acquisition: Meshify

IoT summary:
- IoT is a threat as it will reduce risks currently insured
- IoT will significantly impact our current industrial/commercial book of business
- IoT presents a significant market opportunity to companies that can combine technology capabilities with risk management capabilities
Digital Partners
Andy Rear
Digital Partners at a glance

Mission: To develop a new “digital wholesale” business field for Munich Re – accessing distribution that neither our primary or reinsurance business fields access currently

- Founded May 2016
- 30 employees operating as a single global team from London, Palo Alto and Cincinnati
- Experienced management team, with insurance, technology, consulting and programme management backgrounds
- Working closely with our partners at Munich Re who offer us expertise and support services
- Global mandate across all retail and small-company business classes
Digital Partners seeks to exploit three disruptions

From …
Reinsurer

“Enterprise insurer”
- Policy admin systems
- Enclosed data
- Large customer-service teams

… to
MICRO-SERVICES PRODUCTION CHAIN
Capital
Data
Automated cloud-based policy admin
Channel

Brokers
- Personal lines
- Commercial lines

Customer
(Personal)
(Commercial)

1. Micro-services changing the cost of insurance technology
2. Data in the cloud enabling a frictionless customer experience
3. Sharing economy mixing personal and commercial
Our proposition

EXAMPLE PARTNERSHIPS

- **trōv**
  - USA, then Asia and Europe ex UK
  - Trov technology
  - Munich Re led Series D

- **Drover**
  - UK
  - Munich Re technology
  - No investment

- **Slice**
  - Global, starting in US
  - Slice technology
  - Munich Re invested in Series A
We partner with disruptors who are changing the way insurance is experienced by customers

What makes a good partnership

- **Large total addressable market** – big enough opportunity to reward success
- **Credible team** – capable of building a business to address the opportunity
- **Testable proposition** – learning comes at an acceptable price
- **Sustainable partnership** – with barriers to entry for cheaper capacity

Establish relationships with new potentially strong players in the market and learn/develop new capabilities that can be transferred to traditional clients later on
Digital Partners – Strategic investment activities

Investment thesis
- Participate in upside
- Accelerate growth
- Strengthen relationship
- Increase strategic value of partnership
- Fund ecosystem development for Munich Re and industry

Investment approach
- Minority stakes of <20%
- Stage-agnostic
- Sweet spot US$ 2–5m – will do seed investments and up to US$ 20m
- Active investors: Lead or follow, board seat or observer required

Current portfolio
- US$ 35m invested in US and UK
- Technology companies with MGA business model
- Digital and data-driven customer experience
- Consumer and small business lines of business

Key element of Digital Partners’ strategy is to invest in selected partners as strategic business owner for investments by Munich Re/HSB Ventures
Trōv app enables people to easily insure things they love, for whatever duration, entirely from their smartphone.

How it works

1. Easily collect details about your things
2. Swipe to protect just what’s important to you
3. Choose the price that’s right for you
4. Swipe to claim for damage, loss or theft
5. Claims are as easy as sending a few text messages

Major elements of the partnership

How does Trōv benefit?
- Product, underwriting and pricing are experimental and needed to support the Trōv customer experience
- Munich Re’s international footprint and venture capital funding facilitates quick global expansion

How does Munich Re benefit?
- Investor and board member of innovation-leader
- Capacity provider in multiple countries
- Learning how to manage on-demand insurance
Slice Labs – Insurance for the sharing economy

How it works

1. Reach Slice directly or through white-label channel (e.g. Progressive.com and 1-800-Progressive)
2. Go through simple underwriting process in advance
3. Turn on insurance on the app or by text when you need it

Major elements of the partnership

How does Slice benefit?
- This product combines commercial and personal lines so required new underwriting thinking
- Munich Re’s international footprint and venture capital funding facilitates quick global expansion
- Munich Re rating supports B2B2C channels

How does Munich Re benefit?
- Investor and board member of innovation-leader
- Access to channels not otherwise available
- Developing deeper understanding of sharing economy
Bought by many – Insurance tailored to individuals with specific needs

How it works

1. BBM uses Facebook to determine your interests and match these to relevant insurance products
2. Products are tailored to, and with, groups with a particular interest
3. BBM focus on groups for whom a specific matching product does not exist: “insurance for the long tail”
4. Initial evidence suggests lower acquisition costs, and higher retention than “untailored market”

Major elements of the partnership

How does BBM benefit?
- Flexible mix of Munich Re and BBM technology
- Experimental product design and pricing
- Venture capital
- International scale

How does Munich Re benefit?
- Detailed data on customer behaviour
- Investor in, and insurer to, platform with exceptionally high net promoter score
- Understanding of social media marketing
Drover – Enabling Uber drivers and creating a new asset class for investors

How it works

1. Fleet owner makes cars available on Drover platform
2. Driver rents on flexible terms
3. Both owner and driver are insured via Digital Partners API

Major elements of the partnership

How does Drover benefit?
- Insurance via API: fully automated digital customer experience
- Simple interface to Drover platform
- Rating to attract larger fleet owners

How does Munich Re benefit?
- Profitable and growing business line
- Data on sharing-economy driver behaviour
- Ability to add further distribution to the platform
Building sustainability – Digital Partners in 5 years

40 live partnerships

US$ 250m VC investments

€70–100m operating investment

Global, multi-line proposition

Unique frictionless and automated underwriting and claims capabilities

Maintained technology advantage

Shareholdings and board seats in partners

OUR AMBITION

To build a global digital-wholesale insurance platform with a largely fixed cost base and a substantial bottom-line contribution
The relative investment into nexible is low – But a clear commitment to target a niche and new way of working

ERGO strategy programme

- **Overall investment to build** nexible in Germany and another market until 2020 <€50m (gross)
- **Limited budgets for ramp-up** and running will trigger creative solutions to solve problems
- **Relatively low fixed costs** do lead – with acceptable scale – to very competitive expense ratios in the market

**ERGO strategy programme**

<table>
<thead>
<tr>
<th>Fit ...</th>
<th>Digital ...</th>
<th>Successful!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sales – Elimination of redundant structures</td>
<td>5 Foundational IT – Reliable service</td>
<td>8 Fundamental optimisation of product portfolio</td>
</tr>
<tr>
<td>2 Administration – Efficiency improvement</td>
<td>6 Digital IT – Flexible and quick implementation</td>
<td>9 Integrated offerings for hybrid customers</td>
</tr>
<tr>
<td>3 International – Strengthen set-up</td>
<td>7 Processes – Strengthen resilience and automation</td>
<td>10 Solutions for pure online customers</td>
</tr>
<tr>
<td>4 Life Germany – Separation of traditional back book and new business</td>
<td></td>
<td>11 Strengthening of international commercial/industrial business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 International B2B2C partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13 International growth</td>
</tr>
</tbody>
</table>

**Net investment of ~€1bn (2016–2020)**

- €400m
- €400m
- €200m
We see an untapped demand for pure online insurance

Customer need?
- Go online and find the best insurance – fast, easy and low-priced
- Be confident about having the right cover and paying the right price
- Have transparency, convenience and “full control” of own insurance cover

Reality?
- Customers are faced with complex products and lengthy questionnaires
- Customers look for lowest prices in aggregators as the only “hard measure”
- Customers experience system discontinuities, forget passwords and coverage and wait for feedback

Yet, no player within the market has given full control over insurance cover to the customer
Starting conditions for nexible have been validated

Service quality of motor insurers in Germany?¹

- "Inadequate": 10%
- "Good": 21%
- "Sufficient": 31%
- "OK": 38%

Acceptance for pure online sales, claims, service?²

- "Yes, I consider it": 40%

The innovator’s dilemma within large corporations

“Lead customers” determine resource allocation

Niche markets do not satisfy large corporations

Disruptive market changes can not be analysed

Existing processes and values are limiting success

Technology often confused with customer demand
That’s why nexible is well-positioned to innovate

We are targeting a niche market only

We appreciate our market opportunity

We build, measure, learn to find sweet spots

We create new processes and values

(but take advantage of corporate resources)

Make our customers love what we do
nexible is set up with a clear value proposition

We built nexible to focus and best serve pure online customers.
We came to stay, being part of two huge insurance companies.
We are expanding in products and countries.

We’re a spin-off.

No paper, no phone queue, cancellable monthly.
Competitive pricepoints for our customers because we have low costs.
Get fast help by using the digital channels you prefer.

All we do is digital.

Get insured in less than 90 seconds.
Get claims settled in hours and relax.
Change your details and your policy whenever and wherever you want.

We’re fast and easy.
The customer impact is tangible: It’s simply made to fit

- 90 sec to price for one all-in package
- Claim settled and paid in <2 hours
- Change contract and coverage – where-/whenever
Duty first: We start with what’s most important, and work on excitement by experimenting

From duty …

We have a great product …
- State-of-the-art pricing
- Worry-free coverage packages
- Reliable (with ERGO and Munich Re)

… that easily fits your changing life and …
- Pay monthly, cancel monthly
- Customise your coverage, decide yourself
- Low-effort self-service saves you time

… it’s digital, but feels personal
- We are mobile first
- We are a brand with edge, character, humour
- Trust through the team and testimonials

… to excitement

Always-available service by the digital channels you prefer, full transparency

… be in control of a complex subject

Intuitive design, slick and easy, with a twinkle in the eye that makes you smile

… enjoy a UX\(^1\) that feels great

e.g. provide incentive for desired behaviour or gamification elements

… have a bit of fun and get rewarded

e.g. co-creation with existing communities to build the perfect product

… feel unique by embracing passion

A purely digital insurance …

… which is more than you think.

\(^1\) User experience

Focus in 2017
Ongoing customer-affinity tests and user experience experiments
“Einfach online versichern” is our motto –
A low cost operation offering a great customer experience

Keep it simple
1. All-in-one tariff
2. Cancellable every month

Do it online
1. Pure online touchpoints, great user experience
2. Risk factors adjustable anytime (repricing)

Design to cost
1. Lots of standard, avoid exceptions
2. Continuous automation step by step

Be edgy
1. Gain momentum with existing online channels
2. Drive brand awareness by edgy experiments

= Simply insured online
nexible DE has built an API-centric platform for more speed and flexibility

API-centric technology approach

- State-of-the art API-centric platform – efficient build-up of new business models using API to connect to third parties
- Efficient business model due to automation of core processes avoiding low-level manual tasks performed by humans
- Dynamic pricing capabilities for fast-paced product building and development
- Further efficiency and effectiveness realisable by integrating machine learning capabilities based on end-to-end insights gathered all the way through an integrated business model

Risk carrier = nexible Versicherung AG
MGA (e.g. platform, front-end) = nexible GmbH
nexible is aiming to offer a simple product for an attractive price in selected segments

- Up to 20 criteria with 2–4 options, each differentiated in typical motor tariffs
- Hard for consumers to understand what’s in and what’s out, what’s needed and what’s not
- Pricing inflated by sales channel considerations and unclear discounts

vs.

- Best and relevant coverage picked to form one tariff that fits every typical need
- Pricing fully risk-adequate and very competitive in selected customer segments
- Customer can choose from options easily, but we only present options with “wallet-impact”
We focus on motor first for volume and learning – And leverage experiences for services, products and markets

**Phase 1**
- Start with online motor insurance product (highly transactional, big volume market)
- Focus on aggregators for launch in busy season of 2017
- Build-up of customer base crucial to drive customer-centric cross-selling and value-added services along the journey

**Phase 2**
- Leverage experiences from motor MVP to enrich customer self-service
- Build further products based on feedback gathered and increase customer profitability through cross-/upsells
- Scale offerings to further markets
nexible benefits from its position within Munich Re (Group)

**ERGO**

Support from functions (e.g. HR, Legal)

Data science know-how and capabilities

Joint real-time advertising

Procurement power and operations scalability

International market know-how and access

Broad insurance customer base and know-how

**Munich RE**

Artificial intelligence services

Data science know-how and capabilities

Branding

Consultancy, e.g. Munich Re Motor Consulting Group

International market know-how and access

Broad expert network

- **DEFENCE VS. DISRUPTION**
- **LOW-RISK TESTING ABILITY**
- **ADAPT NEW PRACTICES**
- **BUILD UP REAL DATA**
- **GROW IN NEW MARKETS**
The nexible team brings in all required capabilities

MANAGEMENT TEAM

CEO

COO (Interim)

PROJECT TEAM (WITHIN ERGO)

Business development

Transformation back into ERGO

Public relations

Human resources

OPERATIONS

Operations and Business Intelligence

Claims Management

Operations Processes

Claims Process and Customer Experience

Operations and Customer Service

Claims and Partner Management

CLAIMS AND SUPPORT

TECHNOLOGY

Chief Product Owner

Architecture and Technology

Chief Actuary

Product Management and Underwriting

Product Owner Frontend and User Experience

Actuary (Interim)

Digital Branding

Performance Marketing and Analytics

Social Media Performance Marketing

MARKETING

PRODUCTS AND SERVICES

COO (Interim)

CFO
We learned that a few things are key to being successful

1. We trust in the brand we create and fill it with life
2. We stick to our beliefs, but do not shy away from massive pivots
3. Pure digital means pure digital – as far as we can get
4. Unleashing the power of two giants, we benefit from being part of ERGO and Munich Re
5. We balance leveraging corporate resources and establishing true autonomy
6. Speed beats perfectionism – we fail fast and learn more
7. Development and learning cannot be a silo – we systematically share back with ERGO
# Financial calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 February</td>
<td>Preliminary key figures 2017 and renewals</td>
</tr>
<tr>
<td>15 March</td>
<td>Balance sheet press conference for 2017 financial statements</td>
</tr>
<tr>
<td></td>
<td>Analysts’ conference in Munich with videocast</td>
</tr>
<tr>
<td>25 April</td>
<td>Annual General Meeting 2018, ICM – International Congress Centre Munich</td>
</tr>
<tr>
<td>8 May</td>
<td>Quarterly statement as at 31 March 2018</td>
</tr>
<tr>
<td>8 August</td>
<td>Half-year financial report as at 30 June 2018</td>
</tr>
<tr>
<td>7 November</td>
<td>Quarterly statement as at 30 September 2018</td>
</tr>
</tbody>
</table>
# Investor Relations Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian Becker-Hussong</td>
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<td>+49 (89) 3891</td>
<td><a href="mailto:cbecker-hussong@munichre.com">cbecker-hussong@munichre.com</a></td>
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<td></td>
<td><a href="mailto:bhamberger@munichre.com">bhamberger@munichre.com</a></td>
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<td></td>
<td><a href="mailto:igrunwald@munichre.com">igrunwald@munichre.com</a></td>
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<tr>
<td>Thorsten Dzuba</td>
<td>Tel.: +49 (89) 3891-8030</td>
<td></td>
<td><a href="mailto:tdzuba@munichre.com">tdzuba@munichre.com</a></td>
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<td>Ralf Kleinschroth</td>
<td>Tel.: +49 (89) 3891-4559</td>
<td></td>
<td><a href="mailto:rkleinschroth@munichre.com">rkleinschroth@munichre.com</a></td>
</tr>
<tr>
<td>Christine Franziszi</td>
<td>Tel.: +49 (89) 3891-3875</td>
<td></td>
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