Insurance Business Out of The Box

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NOVUM at a Glance

Founded in 1993 - ISV focused on the insurance industry
- standard software for P&C, Life, Health
- standard software for application and contract management, claims and benefit, commission, collection and disbursement, offer and sales management
- claims management portal application

The USP of NOVUM
- V’ger Application Family (P&C, Life, Health)
- V’ger Sky - cloud service offering based on
- NOVUM Cloud Platform (NCP)

Number of employees: >150
Revenue: >25 Mio. €
Locations: Germany, Austria, Switzerland, Slovenia

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Achim Heidebrecht

> 30 years IT experience (Sell and Buy Side)
  • Since 10/2015 CTO of NOVUM Group
  • Talanx Group
    2007-2015 Head of Group IT, Talanx AG, Hannover
    2002-2007 Head of IT and a member of the extended
    management board, Targo / PBV Insurances, Hilden
  • META Group (today part of Gartner Group), Bad
    Homburg
    Manager Consultant + Practice Leader Adaptive Infrastructure
  • SYSDAT GmbH (today part of Cancom), Cologne
    Head of Consulting
  • RJR Tobacco (Camel, Winston,...), Cologne
    Deputy Head of UHD and Networks
  • Entrepreneur (Publishing, Software, Travel), Bonn
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Compliance is Lust,
not Load
From traditional ISV to technical MGA *)

NOVUM Cloud Platform (NCP) & V’ger Sky Cloud Service Timeline

(*) technical MGA = technical Managed General Agency

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V‘ger Sky Cloud Service Scope

Core insurance applications as a cloud service
- General ledger interface
- Payments flows interface
- DWH interface
- Easy to integrate (REST API)

Secure & Compliant
- Encrypted & sealed

OpEx instead of CapEx
- No license
- No maintenance contract
- Pay-as-you-go
Preliminary Note: Digitalization Enforces Cloud Computing

New business models enforce
- experimentation
- customization
- adjustments

Business Challenges
- Different market players
- Different value chains
- Taking care of regulatory demands
- Do more, spend less – holistic cost allocation controlling
- Shutdown option must avoid burden for future balance sheets
- Different business and technical interfaces

Technical Challenges
- Confidentiality
- Data integrity
- End-to-End Security
- High availability & Resilience
- Automatic Scalability
- Rock solid Performance
New flexible value chains via a central back office for all market participants out of the cloud

Customer Experience / Journey
- Product ideas
- Sales
- Apps
- Web Site

Third Parties:
- collections, sanctions, FACTA, scoring, claim regulation, etc.

Governance, Risk, Compliance
- Risk carrier
- Product ideas & development
- Capital assets
- Public and regulatory risk and financial reporting

INSURTECH

PRODUCT IDEA
P&C
Life
WEBSITE
SALES
PRODUCT IDEA
STARTUP
HEALTH

Technical MGA

Central Backoffice

Multi Line Risk Carrier

Agent / Startup

Customer
Die Startups bilden die Schnittstelle zum Kunden, Munich Re liefert das nötige Backend

**FRONTEND**
- Kampagnen
- Tarifablauf
- Payment
- Service
- Websites
- Apps

**BACKEND**
- Fachliche Prozesse
- Versicherungs-technische Kernsysteme
- Produktentwicklung
- Bestandssystem Produktentwicklung Schaden / Leistung
- Underwriting
- Fraud Detection
- Partnersystem Provision In-Exkasso
- Solvency II Compliance
- Reporting / Accounting …
- Oversight & Control …
- Technische Prozesse z.B.: REST API

**Risikoträger**
- TPA(s)
- Dienstleister

Quelle: Präsentation vom 05.06.18 Munich Re: Projekt Next Business Model - Ein Praxisbericht – Veranstaltung Cloud-Einsatz in Versicherungen, Leipzig
getsafe & Munich Re starteten im Oktober 2017 ihre Pilot-Kooperation, die 2018 sukzessive ausgebaut wird.

**Frontend:** Webseite & App

**Backend:** V‘ger Sky Cloud Dienste

- Cloud-basiert und multi-line: Non-Life, Life, Health
- Kundenzentriertes Backend
- Master-Police

Quelle: Präsentation vom 05.06.18 Munich Re: Projekt Next Business Model - Ein Praxisbericht – Veranstaltung Cloud-Einsatz in Versicherungen, Leipzig
Veränderte Wertschöpfungsketten erfordern eine angepasste (neue) Fertigungstiefe und entsprechende Business Services

Beitrag anderer Markteilnehmer zur Wertschöpfungskette

- Markteilnehmer
  - Vertrieb & Marketing
  - Risikoträger
  - Third Party Administration
  - …

- Backend-Anwendungsplattform
  - On-demand self-service
  - Broad network access
  - Resource pooling and customizable
  - Rapid elasticity
  - Measured service
  - Pay-as-you-use

Eigene Fertigungstiefe

- Neue Rolle des Organisators verteilter Wertschöpfungsketten
  - Aufbau einer Business-Backend-Infrastruktur
  - Partner-Netzwerkmanagement

- Produktentwicklung & Risiko Mgmt

- Spezifisches Prozesswissen aus Erst- und Rückversicherung

- Recht & Compliance

Quelle: Präsentation vom 05.06.18 Munich Re: Projekt Next Business Model - Ein Praxisbericht – Veranstaltung Cloud-Einsatz in Versicherungen, Leipzig

17. September 2018
Gleichzeitig müssen auch aufsichtsrechtliche, sicherheitsrelevante und hohe selbstgesetzte Anforderungen erfüllt sein.

Weitere Anforderungen an die Cloud Plattform

- Datenschutz
- Business Continuity
- Datensicherheit (IT)
- Underwriting Guidelines
- Daten Integrität & Verfügbarkeit
- Access Mgmt.
Legal requirements in highly regulated industries are currently hindering insurance companies, banks, utilities, healthcare providers from taking advantage of the opportunities offered by cloud computing.
Insurance Business Requirements

Basic legal principles to be observed regarding IT (technology) & data protection in Germany

- IT-SIG, BSI-Law, BSI-KritisV
- Versicherungsaufsichtsrechtliche Anforderungen an die IT (VAIT)
- BDSG / EU-DSGVO (starting 26.05.18)
- §203 StGB
- ePrivacy (coming soon)
- TMG, TKG and more ...

Legal requirements to be observed (BaFin) for “Ausgliederung” in Germany

- Versicherungsaufsichtsgesetz (VAG)
  1. § 23 Absatz 3,
  2. § 32,
  3. § 47 Nummer 8 und 9.
- MaGo - 2/2017 (VA)
  13. Ausgliederung
- Delegierte Verordnung (EU) 2015/35 Artikel 258 Absatz 2, Artikel 274.
- Leitlinien zum Governance-System (EIOPA-BoS-14/253 DE)
  LL 14
  und 60 bis 64
Cloud Service vs. Outsourcing / Hosting

cloud service IS NOT outsourcing
outsourcing = craftsmanship
cloud service = industrial production
Compliance-as-Business-Code: NOVUM Cloud Platform (NCP)

Regulatory requirements have hindered the adaptation of cloud services, especially SaaS/PaaS in regulated markets. The consequences of this include:

- end-of-life IT structures (in-house operation or in traditional outsourcing)
- too high, no longer competitive cost structures
- inflexible infrastructure and application landscapes
- obstacles to the development of new digital business models

The NCP: A managed self-service cloud platform

- designed to help customers (Enterprises, ISVs, Company Builder, etc.) in regulated markets to take full advantage of the benefits of cloud computing
- Speed, security, pay-as-you-use, etc.
New Security & Compliance Model (1/2)

- **Shared Responsibility Model (e.g. AWS)**
  - Slicing the stack enables a new security model
  - Segregation of components, duties and responsibilities
  - Encryption of connections, data and metadata
  - Hardening and sealing of components
  - Infrastructure-as-Code

- **Cloud Computing Tool Set**
  - Infrastructure Security
  - DDoS Mitigation
  - Data Encryption
  - Inventory and Configuration
  - Monitoring and Logging
  - Identity and Access Control
  - Penetration Testing
New Security & Compliance Model (2/2)

E.g. regulatory requirements for Insurer in Germany are defined amongst others by:

- GDPR
- BaFin
- enisa
- EIOPA

Develop an integrated compliance stack

- Based on each responsibility level
- Derived from your security implementation design
- Approved by intern. / national certification bodies
- Controlled by intern. / national regulation bodies

IAM & Customer Data

Application

OS, Network, FW

Data Encryption, Integrity, Identity

CPU, Storage, etc

Region, AZ, DC
New IT Design & Delivery Model (NoOps)

Customer Requirements
- Regulation
- Business
- Non-functional

Governance, Risk, Compliance, and Controlling

Customer Portal
- Self Service Business Administration
- Enhanced Cloud Operation "Robo Waiter"

AWS "Supermarket"

Cloud Platform Architecture
- AWS IAM
- AWS KMS
- Amazon S3
- Amazon Glacier
- RDS PostgreSQL
- VPN connection
- AWS Direct Connect
- Internet gateway
- AWS Config
- Amazon CloudWatch
- AWS CloudTrail
- Amazon SNS
- Amazon SQS
- Amazon EC2
- Elastic Load Balancing
- Amazon WorkSpaces
- Amazon DynamoDB
- AWS Directory Service
- AWS Lambda
- Amazon API Gateway
- Amazon SES
- Cloud Platform

Application

NoOps from a technical point of view
Self-healing technical processes
Legal and compliance issues are key

- Contracts have to cover all necessary aspects of regulatory requirements
  - Scope, SLA, GDPR, and other local requirements
- Defined internal processes are a basic layer
- Certifications are a must have
  - ISO/IEC 27001:2013 is an Information Security Management Systems
  - More important than technology

Providing cloud characteristics according to NIST SP 800-145 is mandatory

- On-demand self-service
- Broad network access
- Resource pooling and customizable
- Rapid elasticity
- Measured service

Pay-as-you use pricing model

- x% of gross premium income
- degressive
References

• V’ger Sky Customer:

Munich RE  

die Bayerische

• Innovation Partner:

KPMG
Three Take Aways

Compliance is Lust, not Load
• A competitive factor

V’ger Sky Cloud Service = Insurance Business Out of The Box
• Core applications for life-, health- and P&C business
• REST API

NOVUM Cloud Platform = Compliance-as-Business-Code
• NoOps
• Open Up for Third Parties by End of 2018
Thank you very much for your attention

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Abstract

Cloud Computing is a game changer for regulated industries. NOVUM has changed its role from software solution provider into a Technical Management General Agency (MGA) enabling insurance groups creating new business value chains in the new digital world. The V’ger Sky Cloud Service covers all necessary components and sub-ledgers (product, contract, claims, collection, commission, partner, etc.) of an insurance company. P&C, Life and Health insurance business all in one cloud service. Insurers can develop new insurance products quickly and can integrate the V’ger Sky Cloud Service easily into their sales apps, web sites and backend systems.

V’ger Sky Cloud Service is compliant and secure according to the requirements of the German insurance industry. The underlaying NOVUM Cloud Platform based on AWS services is certified according to ISO27001:2013.

As an example, the Munich Re were used as the first V’ger Sky Cloud Service / NOVUM Cloud Platform customer to show how new business value chains can be setup quickly, easily, secure and compliant: Insurance Business Out Of The Box

The NOVUM Cloud Platform, the run-time cloud environment for regulated industries, will be open up for third party applications by end of 2018.