Keep Calm and Carry on - the Right Strategy for an Actuary in the face of AI & ML?

Andreas Grigull, Systemorph Germany GmbH

Agenda

- Definition of AI & ML
- AI in Insurance
  - Customer Interaction
  - Health Insurance
  - Motor Insurance
- Changing work environment

About the speaker

Andreas Grigull

Cloud & Innovation enthusiast, result oriented customer advisor

9 years at Microsoft - Industry Strategy Advisor for Insurance

2020 Systemorph Group - Managing Director for Germany

Systemorph

SYSTEMORPH®

Revolutionary Financial Data Management

Systemorph brings unique cloud-based technology and many years of finance industry expertise to transform data management and reporting for insurers.

2 (Fun-) Questions to start with

What is the world record for holding your breath?

What are the expected AI revenues in 2025?

24 min

100-190bn*

*Source: Statista & other public sources

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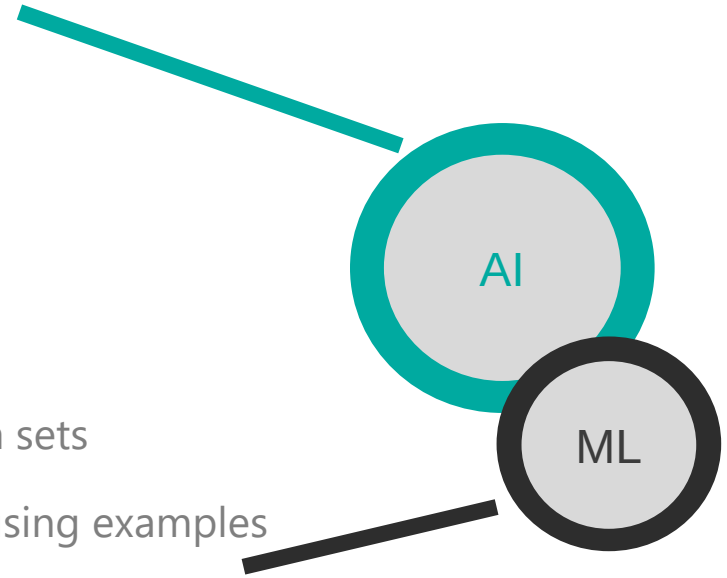
AI Definition

Provides digital experiences with human-like qualities

Recognizes it's surroundings

Imitates cognitive functions



Learns from examples in data sets

writes programs by himself using examples

classifies, recommends, forecasts, groups, segments

NARROW AI

Separate cognitive abilities, eyesight, natural language, recognition, reasoning

STRONG AI

combines weak AI with a consciousness or "mind"

ML Definition

Data

Rules

Classical Programming

Answers

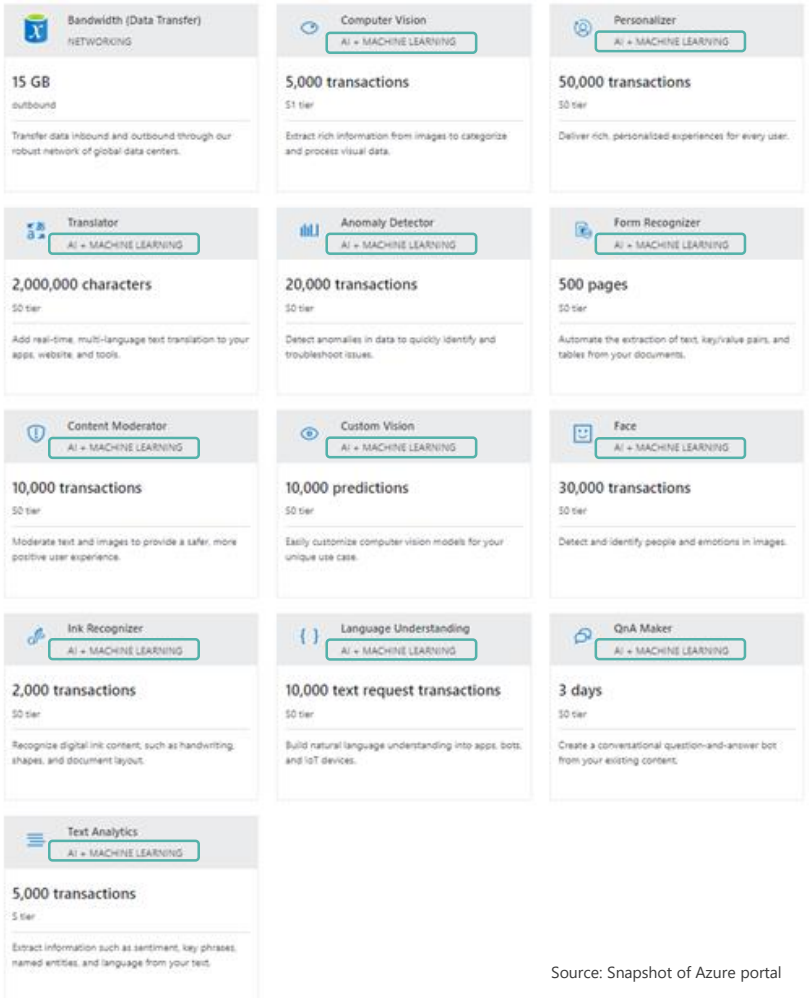
Data

Answers

Machine Learning

Rules

Current developments: AI & ML Together



Source: Snapshot of Azure portal

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WEF: AI in financial services

7 Key Findings

From Cost Center to Profit Center

A new battlefield for customer loyalty

Self driving finance

Collective solutions for shared problems

Uneasy data alliances

The power of data regulators

New ethical dilemmas

7 Key Impacts

Modularized Operations as Service Operations

Customized instead of Price, Speed & Access

AI enabled Customer Services

Prevent Fraud & ML across companies

Partnership also with large Tech Companies

A digital ID will be required for everyone

Safety vs. Ease of Use vs. Coop with others

Source: WEF - new physics of finance

WEF – 5 AI strategies for insurance

Streamline Operations to win on price

e.g. use natural language processing and advanced decision trees to improve underwriting and capital efficiency

Develop a different claims experience

e.g. use image recognitions and fraud detection to speed up claims processing

Improve and expand distribution strategies

e.g. use predictive analytics and new data sources to improve sales efficiency and expand into new markets

Insure against new types of risk in new ways

e.g. use alternative data and dynamic behavioural pricing to develop unique Insurance products that cover new risk categories

Offer add-on services that complement insurance

e.g. use real-time monitoring to advise clients on risk exposure strategies to lower risk

Transforming customer interaction

Transforming operating model

Source: WEF - new physics of finance

AI for Customer Interaction

Typical scenario

- Contextualised knowledge
- Instant recommendations
- Self-supervised automation
- CRM enrichment
- Insights for empathy
- Unsupervised learning
- Contract & Claim closing automation

- Process automation in almost every area
- Identification of customer requirements
- Individualized mass communication

Health – endless opportunities for AI

Typical scenario

- Picture analysis (disease recognition)
- IOT device health supported fitness
- Doctor as an app
- Genomic screening & health plan development
- Health screening from electronic records
- Workforce monitoring platform
- Global scaling disease control

AI & ML will have an impact in nearly every scenario thinkable in health

Source: WEF - new physics of finance

AI for a differentiated claim experience

FASTER
Improve Service
Real time Interaction,
Pictures, video, mail, data

MORE SECURE
Reduce Fraud
Interaction, Pictures, video,
mail, data, relations

P&C example Motor - Tesla

Elon Musk says Tesla is creating a 'major insurance company' after its botched rollout in California last year

Tyler Sonnemaker and Graham Rapier Jul 23, 2020, 4:32 PM

Elon Musk said Tesla wanted to use drivers' data to determine their insurance rates. Getty/Justin Sullivan

1 accident per 4.53 ml miles with autopilot
vs.
1 accident per 1.56 ml. miles without active safety features
vs.
1 accident per 479k miles in US in general

Source: www.tesla.com

P&C example Motor - Tesla

Advanced Sensor coverage
8 surround cameras
250m range
12 ultrasonic sensors
Forward-facing radar

Increased Processing Power
(40 x vs. previous version)

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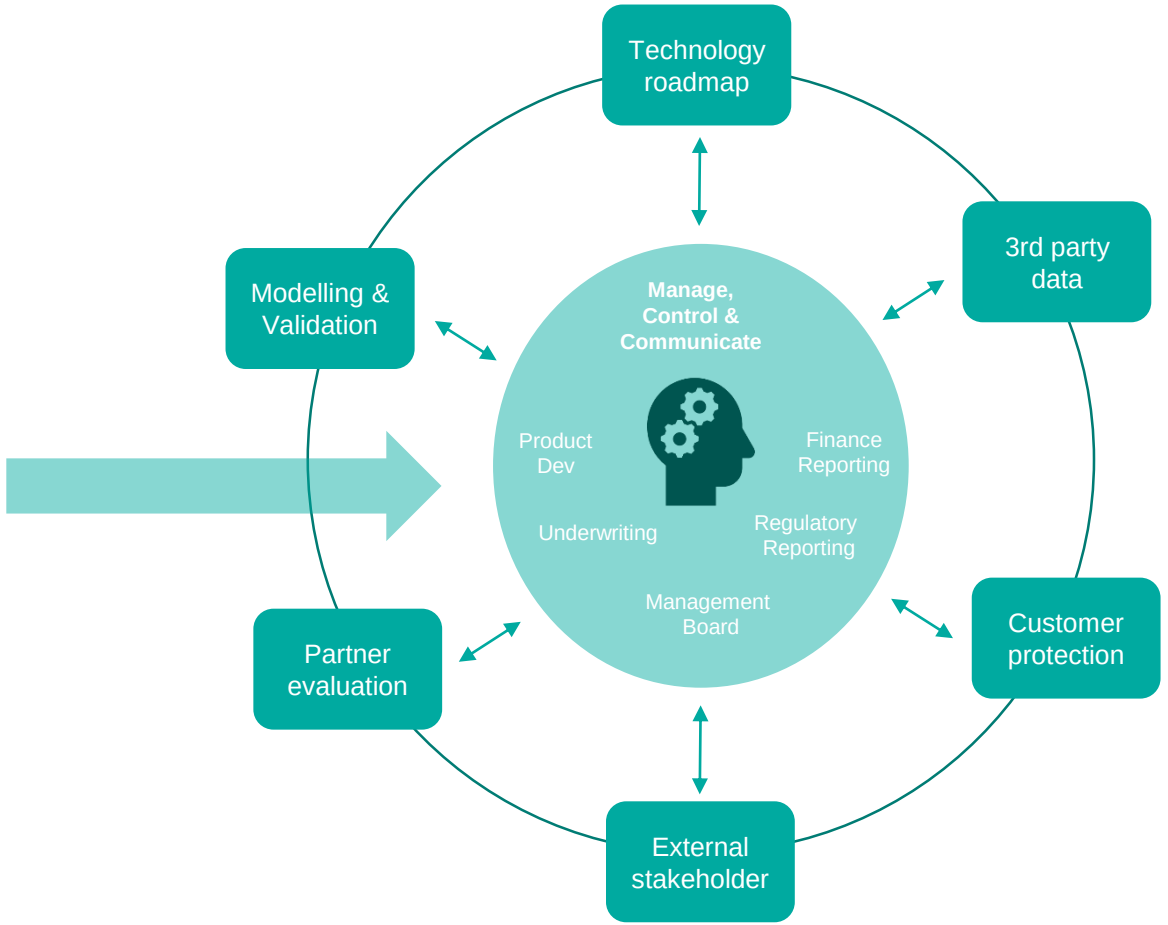
Work for actuaries will and must change

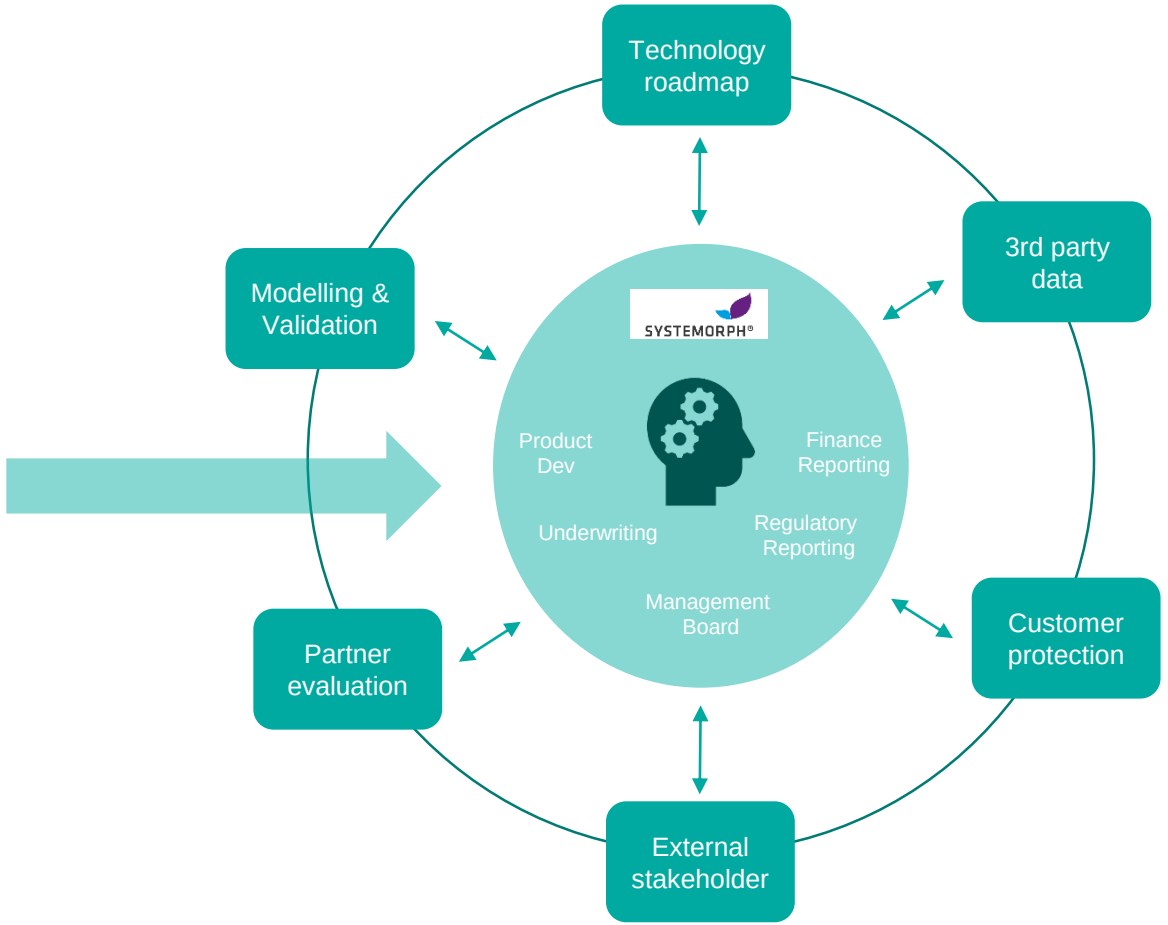
Today – internal focus



Tomorrow – internal & external focus

Work for actuaries will and must change

Today – internal focus



Tomorrow – internal & external focus

Vertex 10 – a quantum leap in actuarial data management

Vertex 10
Key element of your success

SYSTEMORPH®

- Cloud First
- Optimized for Modern Data Science
- Scalable without Limits
  (Horizontally and Vertically)
- Integration with Microsoft Artificial Intelligence
  and Machine Learning

And - If everything else fails…

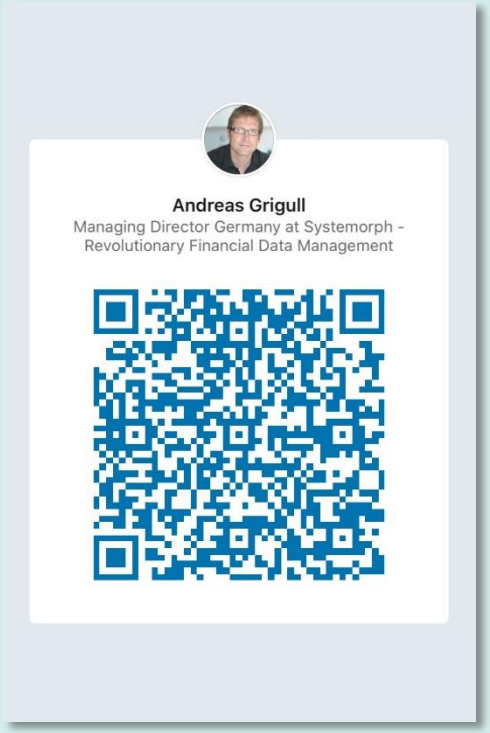
Tesla Invites Actuaries to Help It Create a 'Revolutionary' Insurance Company

By Andrew G. Simpson | July 24, 2020

"I **would love to have some high energy actuaries,** especially. I have great respect for the actuarial profession. You guys are great at math. **Please join Tesla**, especially if you want to change things and you're annoyed by how slow the industry is. This is the place to be. We want revolutionary actuaries,"

Source: Insurance journal, July 24th, 2020

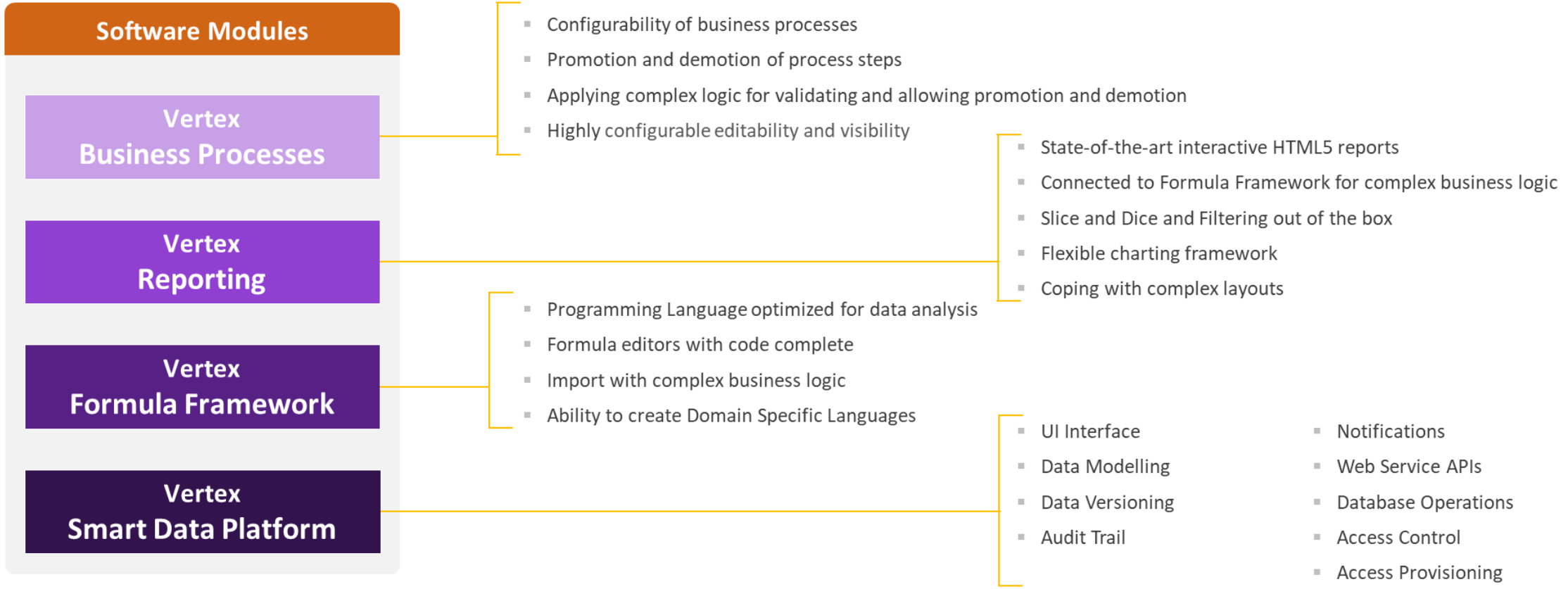
Thank you very much for your attention!



SYSTEMORPH®

Systemorph – Vertex platform

Vertex is engineered for heavy duty enterprise data management, computations, financial reporting, workflows and process automation. It uses various standard interfaces to have it seamlessly integrated into existing IT landscapes. It is designed by actuaries, insurance and IT professionals over the course of almost 10 years.



WEF – 5 AI strategies for insurance

Streamline Operations to win on price	Develop a different claims experience	Improve and expand distribution strategies	Insure against new types of of risk in new ways	Offer add-on services that complement insurance
e.g. use natural language processing and advanced decision trees to improve underwriting and capital efficiency	e.g. use image recognitions and fraud detection to speed up claims processing	e.g. use predictive analytics and new data sources to improve sales efficiency and expand into new markets	e.g. use alternative data and dynamic behavioural pricing to develop unique Insurance products that cover new risk categories	e.g. use real-time monitoring to advise clients on risk exposure strategies to lower risk

Model, control, interprete & communicate the results to stakeholders

Source: WEF - new physics of finance