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Process Automation with Semantic Text Analytics



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Business Track

About Us and Myself

Richard Forster

- PhD in Computational Linguistics, Zurich University
- 15 years of in-depth experience in all processes, tools and strategies related to language, text, retrieval and publications
- Passionate about chess and member of the Swiss national team for >20 years

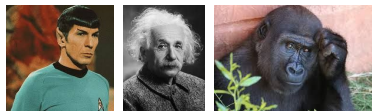
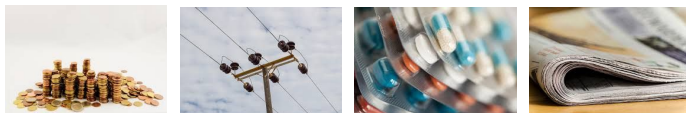


Wabion in Olten

- Head Semantics & Cognitive Technologies
- Leading CH integration partner for Google, Fusion and Expert System
- Mission: help our customers achieve true digital transformation
- Customers: Zurich Insurances, AXA, Nestlé, Tamedia, Migros...



About Cogito



☞ Leading Semantic Text Engine developed by Expert System

☞ Multilingual, covering all major European languages (and then some)

☞ Used in all major industries around the World

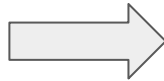
☞ One of the richest and most extensive semantic networks around

☞ Thanks to tight integration of syntax and semantics it understands language the way humans do

Insurance Process (Super-Simplified Sketch!)



Contract



Accident

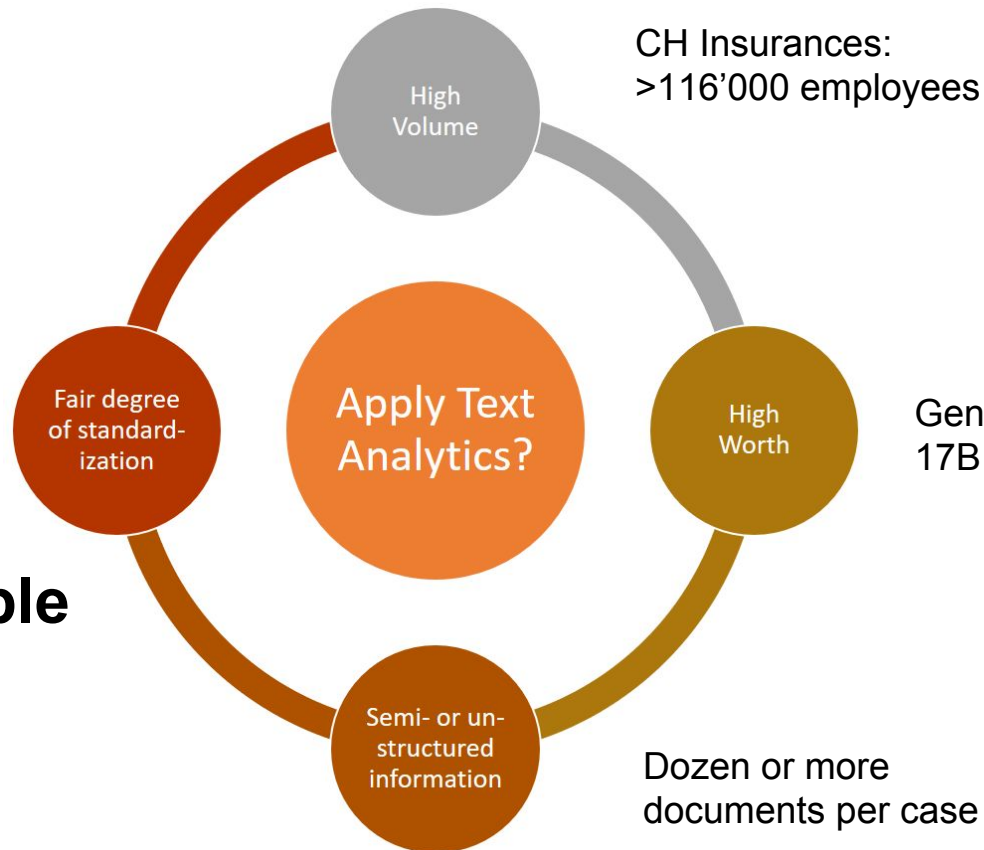


Claim

Text Analytics – Success Factors

Standard document types with a lot of variety, but overall similar content and patterns (contracts, bills, medical reports, police reports, risk reports, forms...)

✓ **Lots of people doing lots of paperwork!**



Process Automation in Claims Management

Liability Decision

Valuation

Negotiation

COGITO

**CATEGORIZE
TEXT AND
ATTACHMENTS**

Detect invoices,
diagnosis, accident
report, etc

Identify LoB and
route messages
accordingly

**ANALYZE
DATA**

Understand and
extract necessary
information:
Vehicle, Insured,
ICD injury code,
[...]

**ACCEPT/REJECT
ANALYSIS**

Take a decision or action
based on
the extracted info

**RECORD CLAIM
AND CLOSE**

RPA stores
data in
existing system

OCR

Subject
Matter
Experts

Claims
Handlers

Benefits

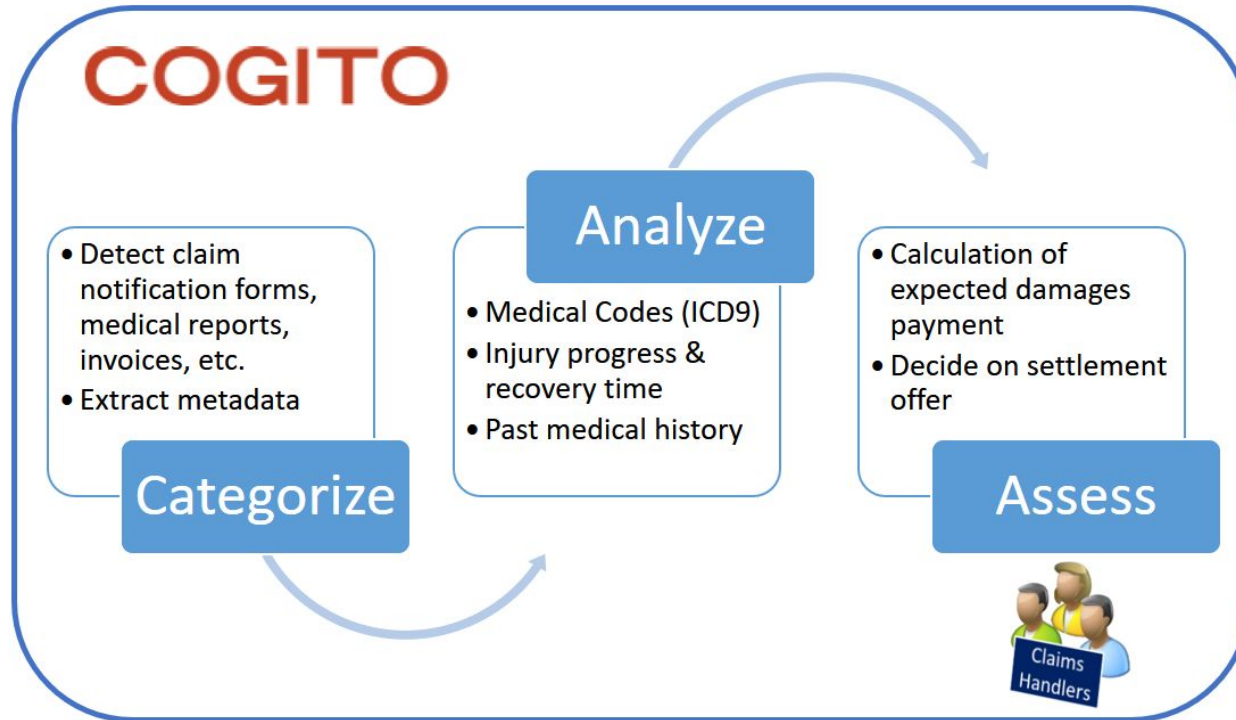
- 🔍 Review time streamlined from days to hours
- 🔍 Reduced claims leakage due to more accurate decision
- 🔍 Smarter analytics thanks to more standard reporting

Process Automation in Claims Management

Liability Decision

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Benefits

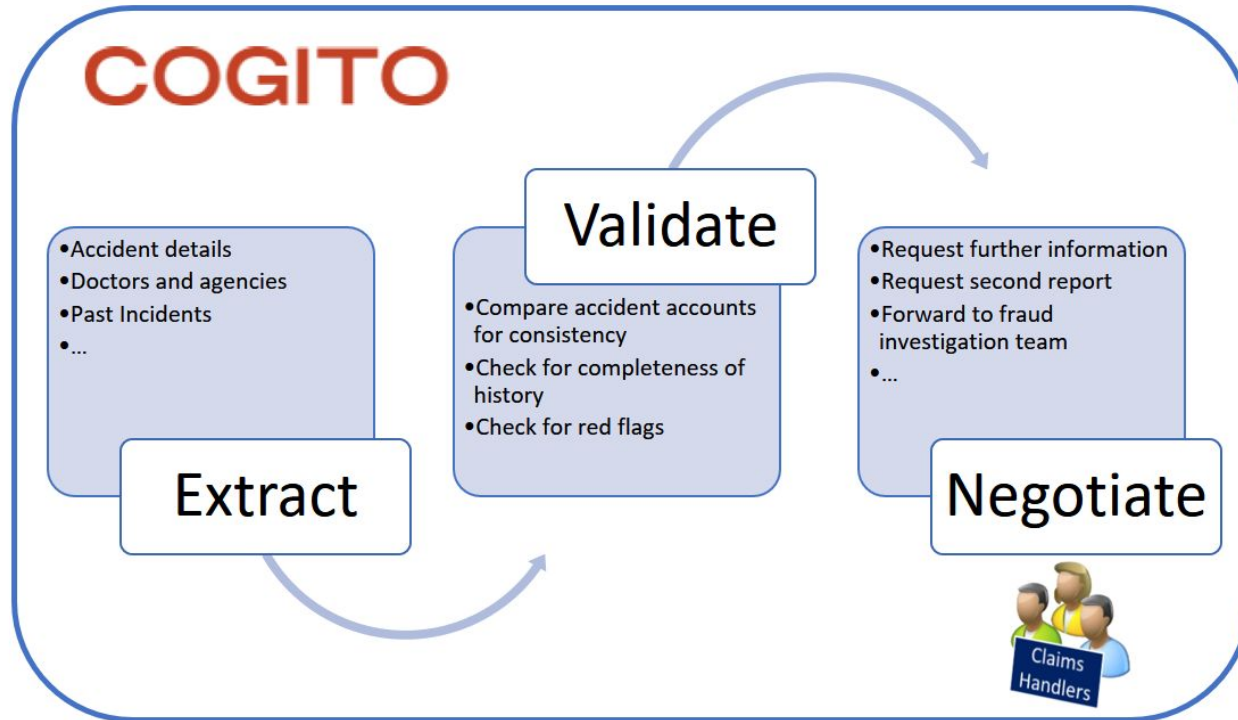
- 🔍 Human effort is reduced by more than two-thirds
- 🔍 More consistent MR assessment
- 🔍 Reduced leakage due to higher accuracy

Process Automation in Claims Management

Liability Decision

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Benefits

- 🔍 More reliability
In detecting fraud indicators
- 🔍 More standardized and better informed negotiations
- 🔍 Reduced leakage and more time/cost-effective

Claim concepts

Claimant

Claimant Name

(18)

Date of Birth

Dec 18th 1971 (12)

Demand Amount

Demand Amount

\$ 60,000 (1)

Accident

Date of Loss

05/26/2014 (1)

Accident Time

3:06 pm EST (1)

Accident Description

PT was rear-ended (2)

47 y/o man PT was the restrained driver in a rear-end collision 1 week ago (1)

Medicine clinic at UMC Stadium, pt in rear end XVC 1 week ago, c/o numbness (1)



Document claim.pdf

◀ Page 2/64 ▶

Because of the underlying motor vehicle accident, [REDACTED] incurred the following damages as represented by his medical bills :

AMR (Ambulance)	\$ 900.34
Montgomery Medical Center	\$ 6,024.28
UMC Medical Center	\$ 2,348.09
Cabin Hills Chiropractic	\$ 1,297.00
TOTAL	\$ 10,569.71

Please see attached exhibits for medical records (ex. 1-4) and billing (ex. 5). Further medical records and billing from UMC, Cabin Hills and Montgomery Medical Center have been ordered and will be sent to supplement this demand.

CONCLUSION

[REDACTED] a very sympathetic plaintiff, who was thrust into this situation through no fault of his. The pain has made his work life excruciating as he is forced to sit for long hours. The pain has also impacted his sleep and made him constantly tired for many weeks. Because he did not have health insurance, he had to discontinue treatment after his PIP exhausted. In light of the serious collision, we believe a jury would award John over \$75,000 for this accident. However in the interests of moving forward, [REDACTED] authorized me to extend a settlement offer of \$60,000 in exchange for a full release of his claim against your insured. I look forward to your response.

Kind Regards,

[REDACTED]



Section G - Accident time, location and description

6.1 Estimated time of accident (24 hour clock) 17:25

6.2 Where did the accident happen? Runswick Road

6.3 Weather and road conditions Weather conditions X Sun Rain Snow Ice Fog

6.4 Please select the most accurate description of the accident circumstances from the list opposite

Claimant vehicle hit by party emerging from side road

X Claimant vehicle hit in the rear Claimants vehicle hit whilst parked Accident in a car park Accident on a

roundabout Accident involving vehicles changing lanes Concertina Collision Other

this section continues over the page ->

8

Section G - Accident time, location and description (continued)

6.5 Please give a brief description of the accident, including approximate speeds of all vehicles and details of the areas of vehicle damage. Client was driving through Runswick Road in heavy traffic when the defendant hit our client in the rear.

Extraction Results

Record / Fields /

→ ACCIDENT_DETAILS_CNF
→ CLAIMANT_MOTION
→ CLAIMANT_ROLE
→ COLLISION_IMPACT_SITE
→ DESCRIPTION
→ DESCRIPTION
→ HOUR
→ LOCATION

in motion
driver
rear
Section F - Accident details5.1 At the time of the accident the claimant was X The driver The owner of the vehicle but not d...
Section G - Accident time, location and description6.1 Estimated time of accident (24 hour clock) 17:256.2 Where did the ac...
17:25
street

Medical Report

Client was driving through Runswick Road

History History of the Accident in Question:

Mr [REDACTED] informs me that he was involved in a road traffic accident. The accident occurred on the afternoon of 15/04/2014. Mr [REDACTED] was the driver of a car. He was wearing a seat belt and the car was fitted with a headrest. At the time of the accident, the car was stationary on a main road. The car was hit by another car from the driver's side. The impact occurred at a medium speed. Air bags were fitted but did not deploy. He was looking straight ahead at the time of the impact. He was jolted sideways. Mr [REDACTED] was able to exit the vehicle

Extraction Results

Record / Fields

Value

→ ACCIDENT_DETAILS_MR
→ CLAIMANT_MOTION
→ CLAIMANT_ROLE
→ COLLISION_IMPACT_SITE
→ DESCRIPTION
→ TYPE_OF_ACCIDENT
→ TYPE_OF_INJURING_VEHICLE

Claim Notification Form

At the time of the accident, the car was stationary on a main road. T



Wrap-Up



Very significant savings in time and effort spent per case



Reduced leakage; fewer unwarranted payouts, more reliable fraud detection process



Improved consistency and higher quality of case assessments, enabling smarter analytics



Better understanding of subject matter, better alignment and better resource allocation



Your Questions

