



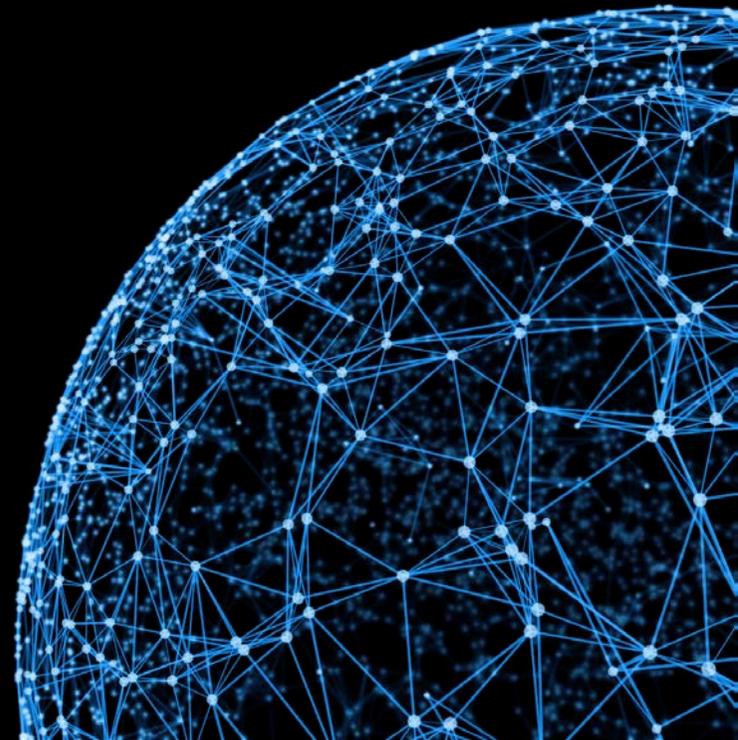
Cognitive Claims

Reimagining the Future

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What is Automation?

What is Cognitive Computing?

What else is changing?

What does it all mean for Claims?

What are we doing in Insurance Claims?

Q&A

The world we live in...

The increasing pace of **change** and **complexity** in the macro environment and in customer expectations requires a *new approach*

Adapting to the 4th Industrial Revolution.

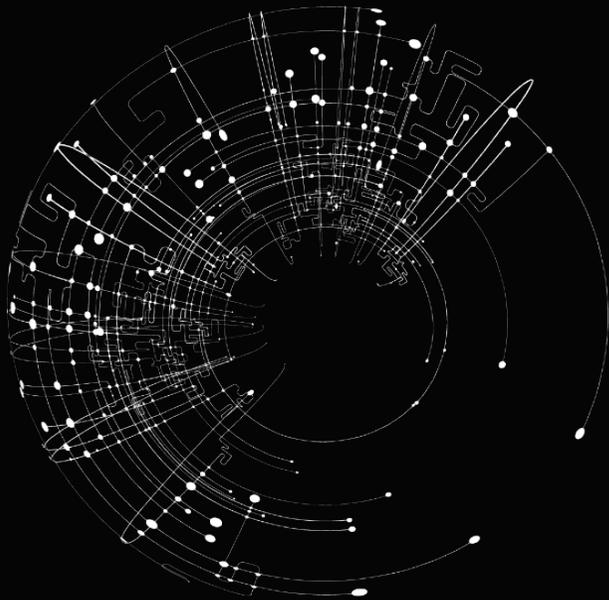
Data is everywhere, and is being produced at an increasing rate.

Competition may come from non-traditional entrants.

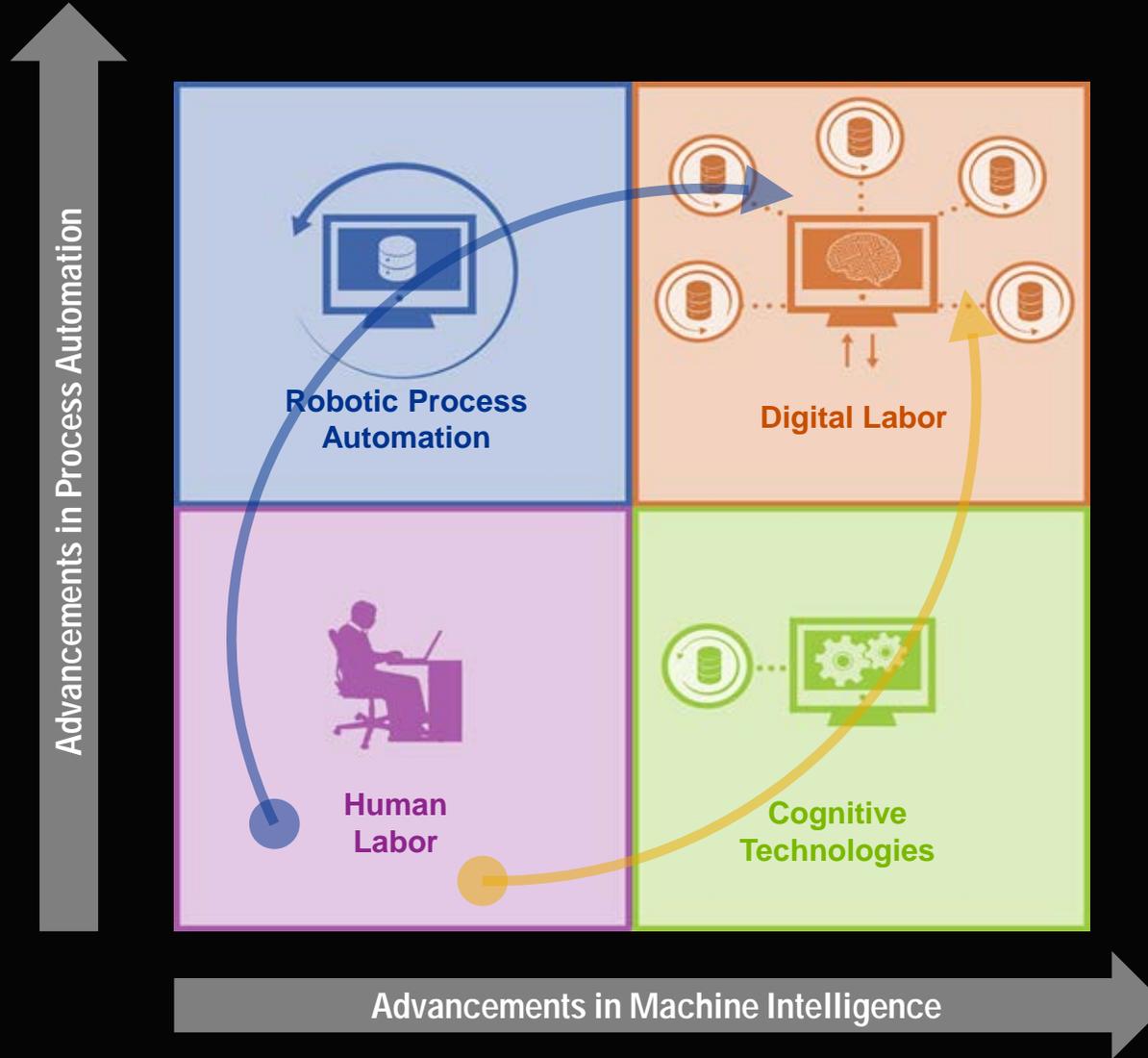
Customer expectations have changed.

• Customers are no longer sold to. They choose to buy.

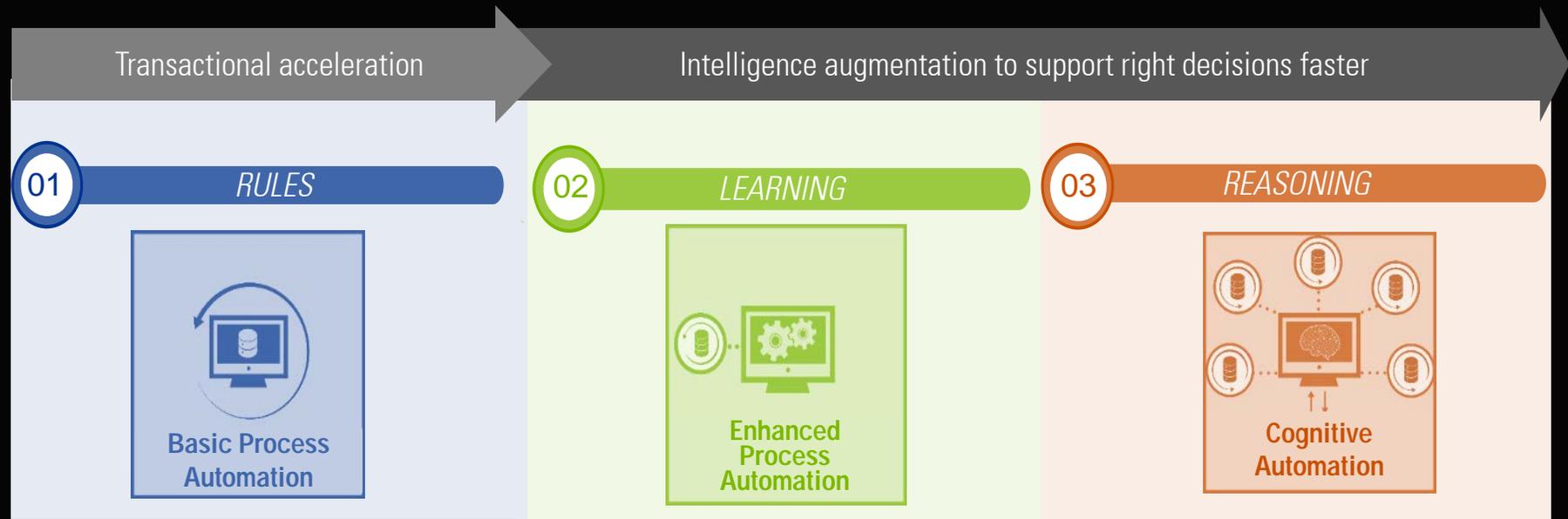
The **choices** an organisation makes in the design of its capabilities today will determine the ability to respond effectively to the future.



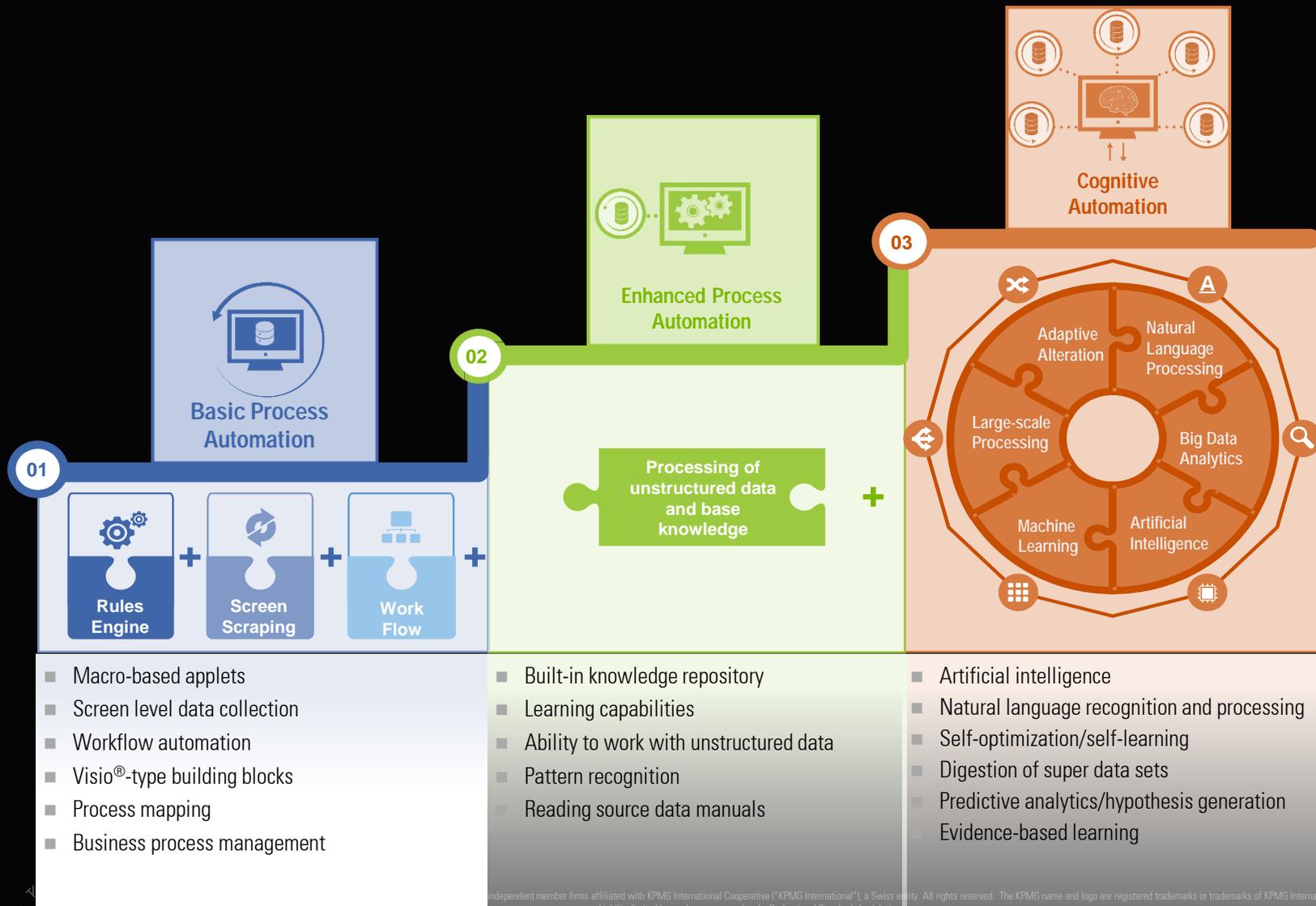
KPMG's Perspective on the Digital Labor Market



What is Cognitive? KPMG's Market Perspective



Cognitive Automation is Changing Rapidly



Robotic Process Automation

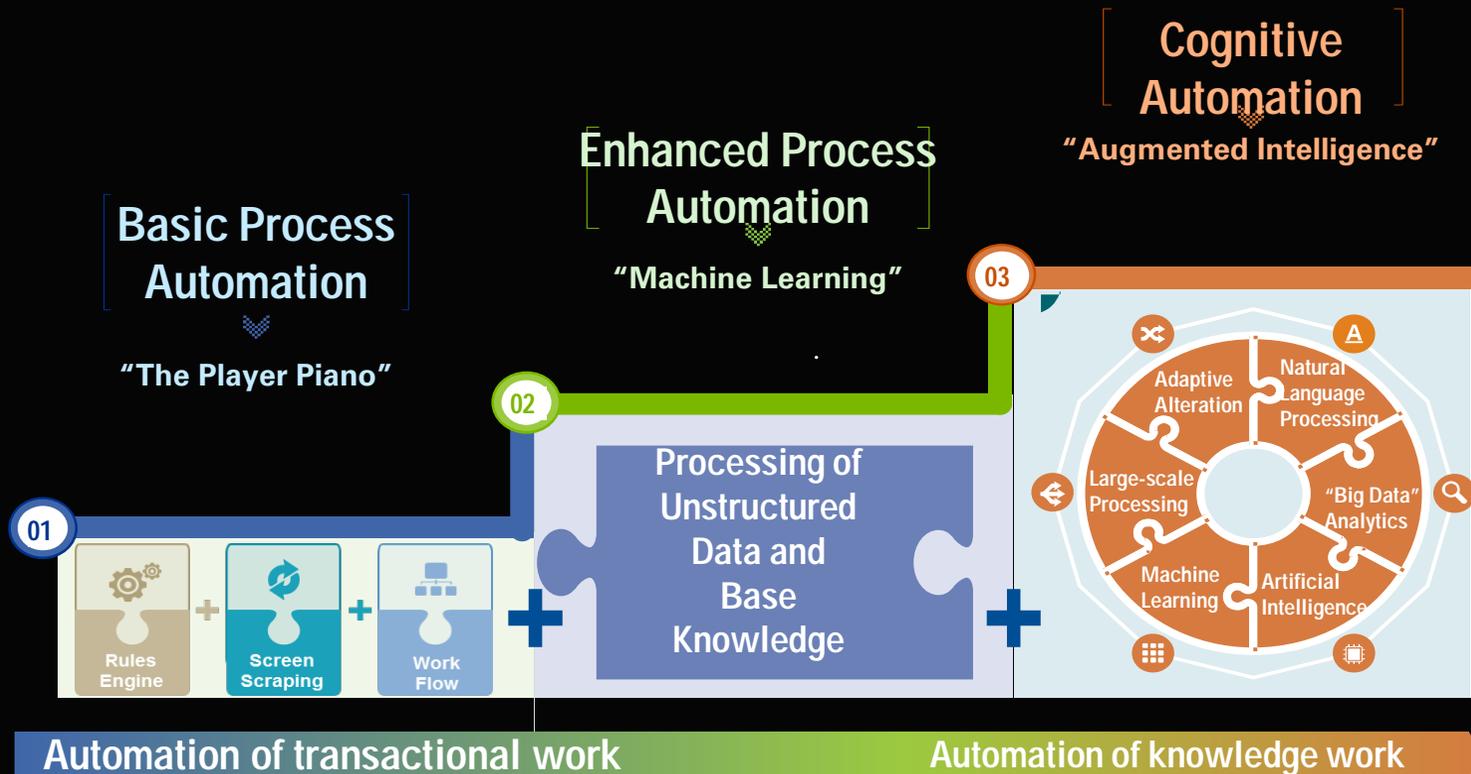


"Low touch" approach for automation of **high volume and repetitive rules based processes** by 'virtual workers'.

An **alternative to outsourcing** or offshoring processes providing an enterprise application to automate the processes traditionally offshored or outsourced to reduce cost.

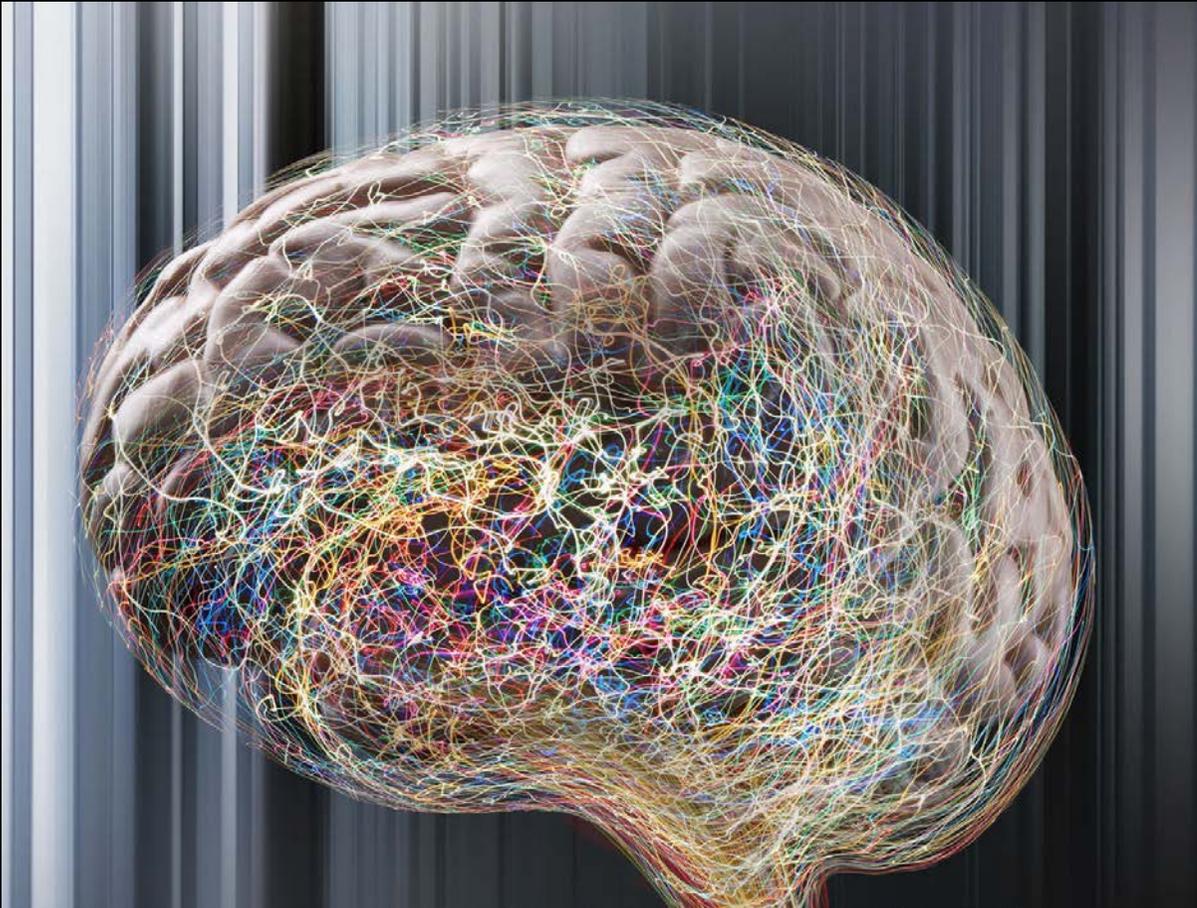
Focuses on automating processes **where traditional automation is not cost effective** or strategic automation options are planned but a tactical solution can provide initial short term benefits.

The automation journey...

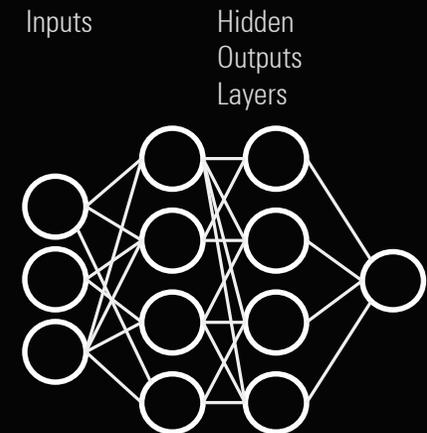


Cognitive Computing

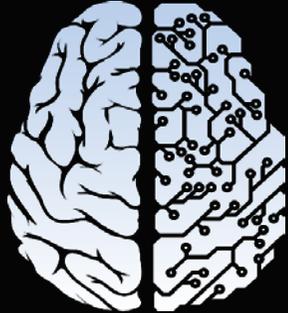
käg-nə-tiv (adjective): of, relating to, or involving conscious mental activities (such as thinking, reasoning, understanding, and learning)



Neural Networks, Pathways and Plasticity



Human or computer?



Human

"Apple's holiday earnings for 2014 were record shattering. The company earned an \$18 billion profit on \$74.6 billion in revenue. That profit was more than any company had ever earned in history."

Computer

"A shallow magnitude 4.7 earthquake was reported Monday morning five miles from Westwood, California, according to the U.S. Geological Survey. The temblor occurred at 6:25 a.m. Pacific time at a depth of 5.0 miles."

Computer

"When I in dreams behold thy fairest shade. Whose shade in dreams doth wake the sleeping morn. The daytime shadow of my love betray'd. Lends hideous night to dreaming's faded form."

What the future may hold

Increased Benefits from Scale and Scope

- ✓ The value of big data is growing as machines become more adept at converting digits into business insight
- ✓ A.I. algorithms are data-hungry
- ✓ Automation favours scale
- ✓ Consolidation or data sharing becomes more likely

Platform Services

- ✓ Exposing services and processes to external organisations spurs innovation and incentivises modular services
- ✓ Convenience, customisation and flexibility become key dimensions for differentiation

Back Office Automation

- ✓ Removal of repetitive and non-value add processes
- ✓ Real-time processing creates new opportunities

Robo-Advice Broadens its Remit

- ✓ Helping people achieve their goals
- ✓ Integrated budgeting becomes the family's daily financial fitness coach
- ✓ Management of the end-to-end home buying process
- ✓ Low friction breeds automation of switching

Industrialisation of Analytics

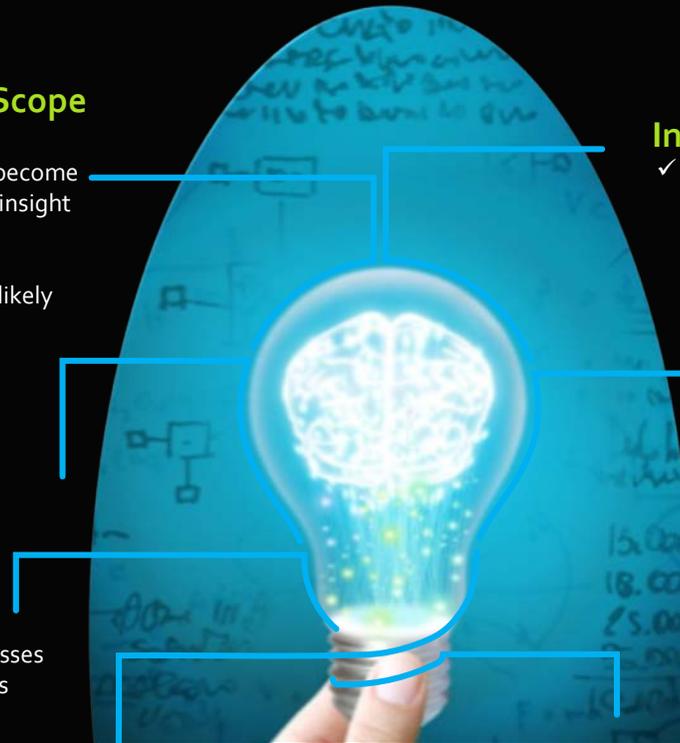
- ✓ Evolving from activities performed and managed by individuals and small teams, to a machine managed, centrally governed exercise.

Enhanced Customer Experiences

- ✓ Instant Chat matures to be preferred over the call centre
- ✓ Voice communication becomes a core source for data mining and automation
- ✓ Facial recognition is used to identify customers.
- ✓ UI evolves towards natural humanistic experiences, often integrated into other software interfaces

Re-imagination of the Product Set

- ✓ Going back to first principles
- ✓ Simplification (or re-skinning) of products to align with customer objectives



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Claims Industry - Key Challenges

Current state of the industry and how it affects insurance companies



Manual Fact Extraction

Manual time intensive task to review all submitted documents and identify additional informational needs

50% of a claims professional's time is spent on administrative activities such as compiling and fact-checking data



Maintaining Knowledge

Each claims handler **relies on their own experience** to make a liability and valuation determination for claims

Audit processes have revealed less than 80% of claims meet the quality standard on average



Unidentified Fraud

Insurance professionals struggle in identifying and evaluating risk exposure due to **lack of uniformity and control**

53% of insurance companies cite lack of IT resources as the main stumbling block in implementing anti-fraud technology

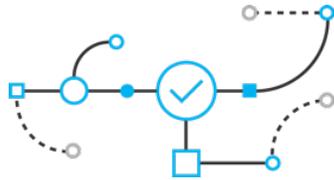


Claims Advisor – Watson capabilities

Current state of the industry and how it affects insurance companies

Cognitive Capabilities

Fact Extraction



Simplify information gathering

- Extract info from submission documents
- Identify gaps in submission information
- Provide provenance and audit trail of facts

Claims Analysis



Enrich claims data

- Identify claims “like this”
- Case Law related to the claim
- Personality of the person coming on claim
- Workflow management – route to most relevant claims professional

Decisioning



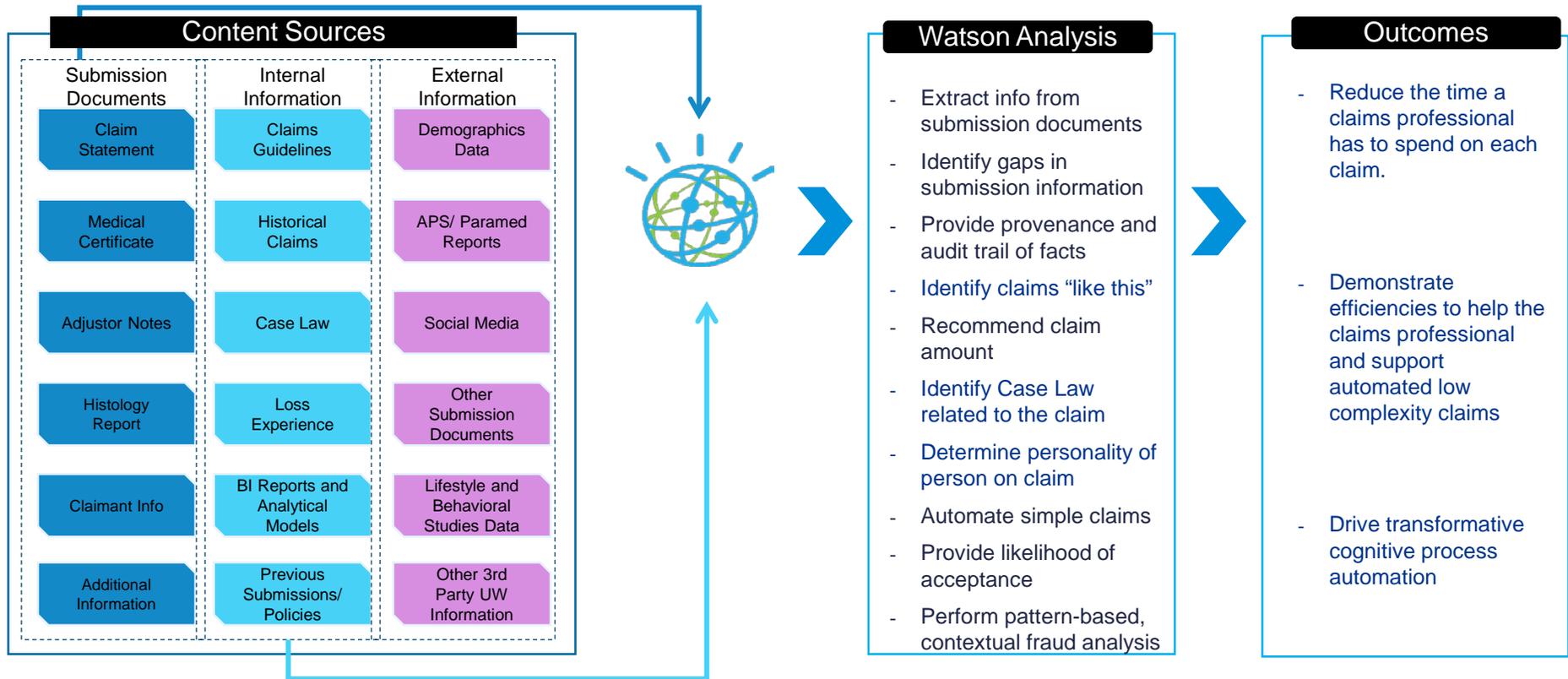
Transform claims decisioning

- Automate simple claims
- Provide likelihood of acceptance
- Perform pattern-based, contextual fraud analysis



Content & Analysis Flow

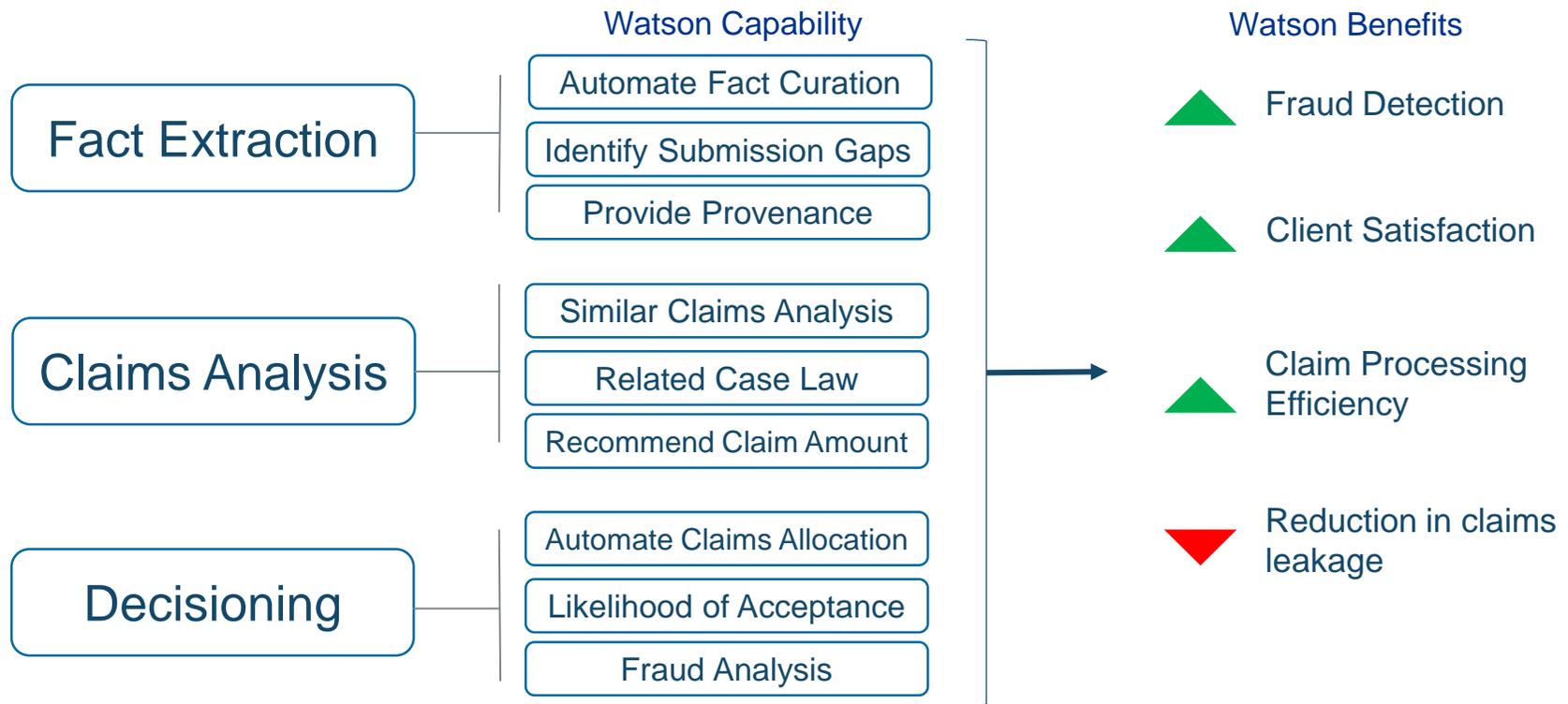
Watson can leverage data from different types of content sources to provide measurable results





Key Benefits of Cognitive Solutions - a case study

The solution to assist with processing of claims submissions, fraud identification and streamlining end to end workflow



Observations

Key opportunities for Cognitive in Claims include

Better financial and service outcomes by utilising existing data, creating new data and using all this data to help inform decisions at key moments/stages of a claim, by:

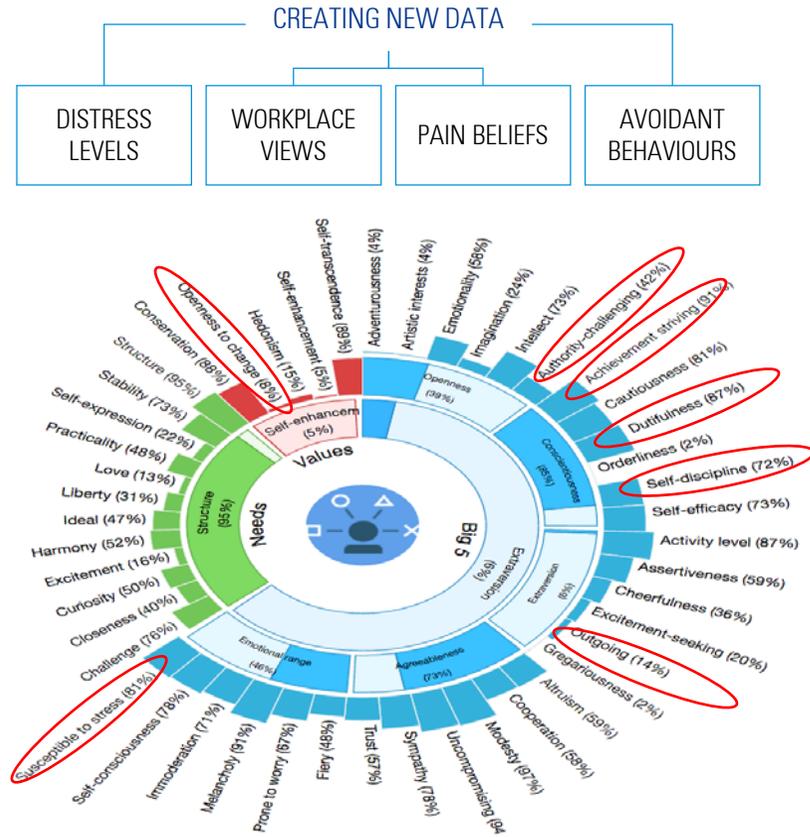
- Assisting with upskilling staff.
- Improving consistency of decisions.
- Long term cost savings.
- Better targeted claims management strategies.
- Scalability (less dependence on scarce skilled resources).
- Knowledge data retention/use.

Managing Claims Duration

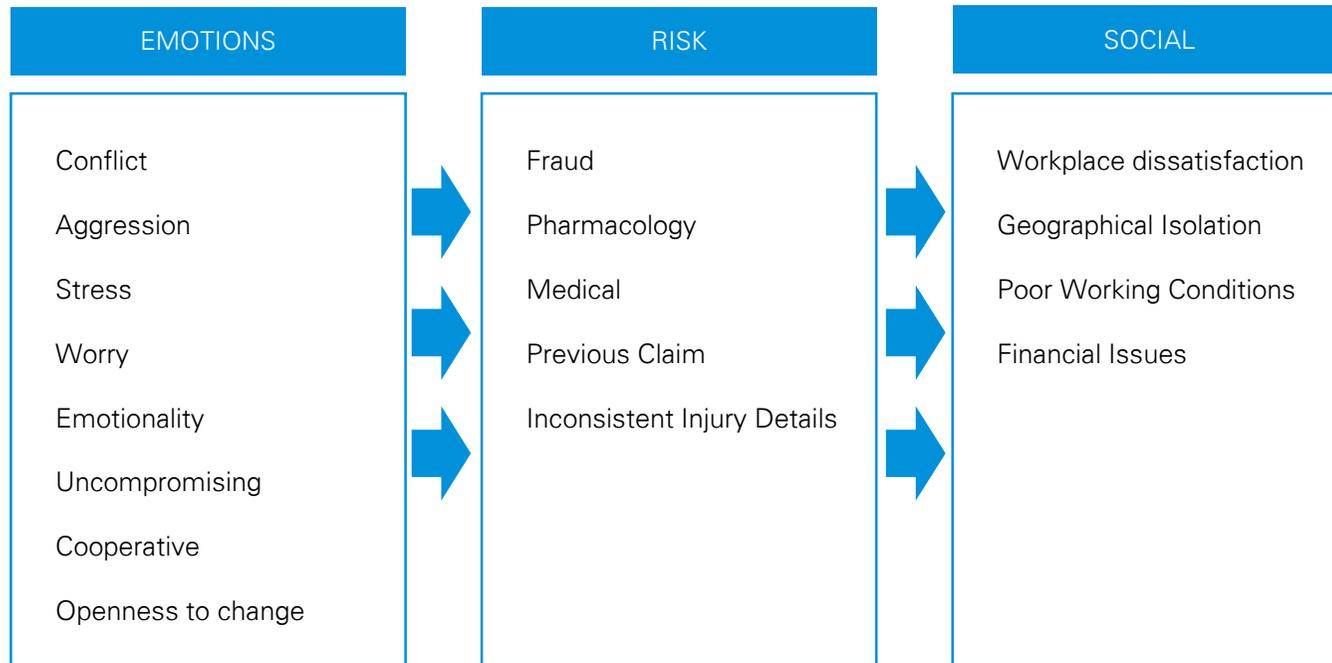
Lots of research including

- Actuarial papers
- Medical papers
- Psychology papers

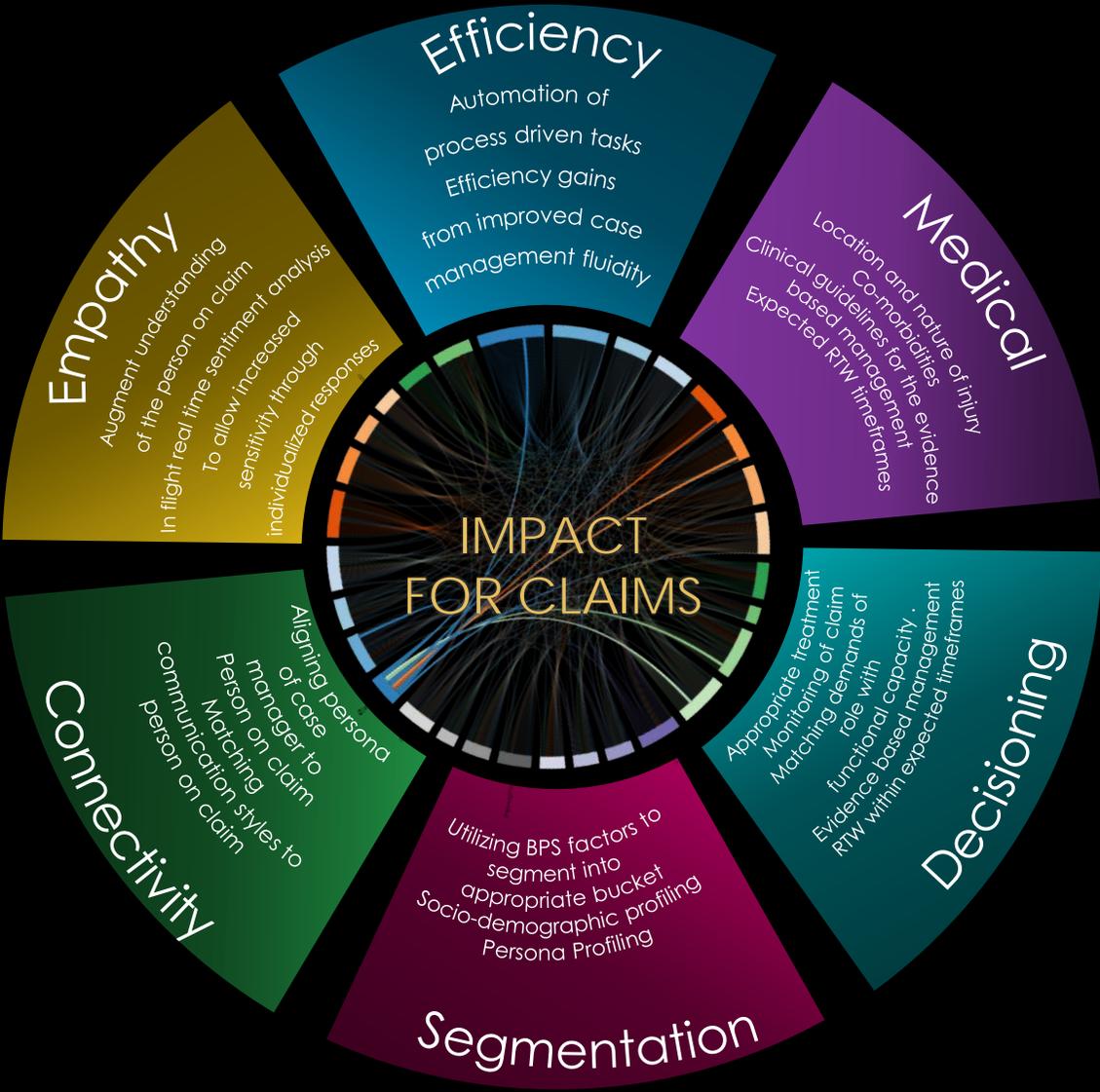
Combining this research together highlights over 100 factors could explain behavior.



Types of Data

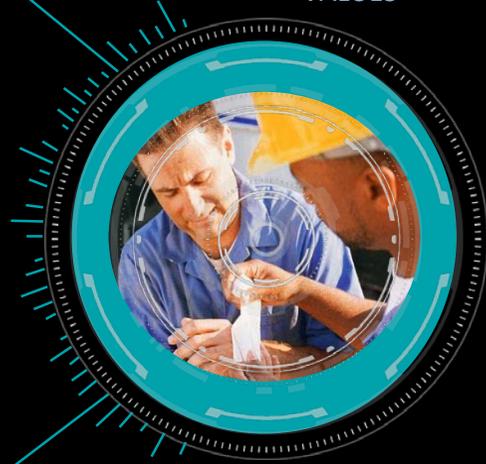


IMPACT FOR CLAIMS



Location of injury from TOCC
 Nature of injury from TOCC
 Age at injury
 Inactivity description from the last known medical certificate (a/n/c, A/L, F)
 Specificity of most requested provider
 Prior claim - continued nature and location of injury for the claim immediately prior to the current claim
 Income estimate
 Recovers entrepreneur flag
 Mechanism of injury
 Occupation
 Industry classification code
 Log between injury and its report
 Worker gender
 Income receipt payment amount
 Hospital admission for injury
 Employer's obligation to pay the first 2 weeks of income maintenance was received (y/n/r)
 Similar injury to past flag
 Prior claim - compensation flag
 Prior claim - legislative flag
 Prior claim - psychological treatment flag
 Prior claim - psychological flag
 Prior claim - psychological treatment flag
 Prior claim - psychological flag
 Prior claim - average prior income maintenance claims duration in weeks
 Hospitalisation (Chaffin et al 2006)
 New department (Chaffin et al 2006)
 Workplace safety or employer (Cohen 1978 to 1980) (Hogg Johnson and Cole 2003)
 Recovery path status (Hogg Johnson and Cole 2003)
 Recovery path treatment (2016) (Hogg Johnson and Cole 2003)
 Number of jobs since age 20 (Hogg Johnson and Cole 2003)
 Percentage of stability in career job (Gardner et al 2009)
 Understood medical condition (Gardner et al 2009)
 Similar (Hogg Johnson and Cole 2003)
 Stop general health - eg work stress, obesity (y/n/c)
 Activity limitations
 Pain intensity (Hogg Johnson and Cole 2003)
 Pain coping strategy (Hogg Johnson and Cole 2003)
 Perceived job satisfaction
 Perceived job involves heavy work
 Perceived job involves repetitive work
 Perceived job involves monotonous work
 Perceived job involves uncomfortable position
 Perceived job involves noise exposure
 Perceived work is physically demanding
 Perceived time pressure in role

Occupation
 Age at injury
 Nature & Location of Injury
 Co-morbidities
 Tone of voice
 Cost to serve estimate
 Pain beliefs
 Social situation
 Prior claims
 Recovery expectations
 Pharmacology



ASPIRATIONS
 EXPECTATIONS
 BELIEFS
 ATTITUDES
 VALUES

MOTIVATIONS
 NETWORKS
 INTERACTIONS
 IDEOLOGY
 PERCEPTIONS

Location of injury from TOCC
 Nature of injury from TOCC
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Segmentation

Right service, Right Time

Persona driven

case management process.

Personalised intervention

to optimise outcome

Monitoring anomaly deviation

Proactive early intervention

Optimise case management experience

Insight driven decision making.

Propensity of fraud

Rapid Holistic understanding



Q&A

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