823.8533

1308.0477

867.2140

982.8425

Image: Getty Images

Data Analytics at Munich Re

Dr. Fabian Winter
Head of Business Analytics
March 2018

Munich RE

The Munich Re Group

Munich RE

Munich Re (Gruppe)[1]

Munich RE

Rückversicherung

Munich RE   Munich RE | 1866   new|re   American MODERN™

Erstversicherung

ERGO   ERGO Direkt   DKV   ERV
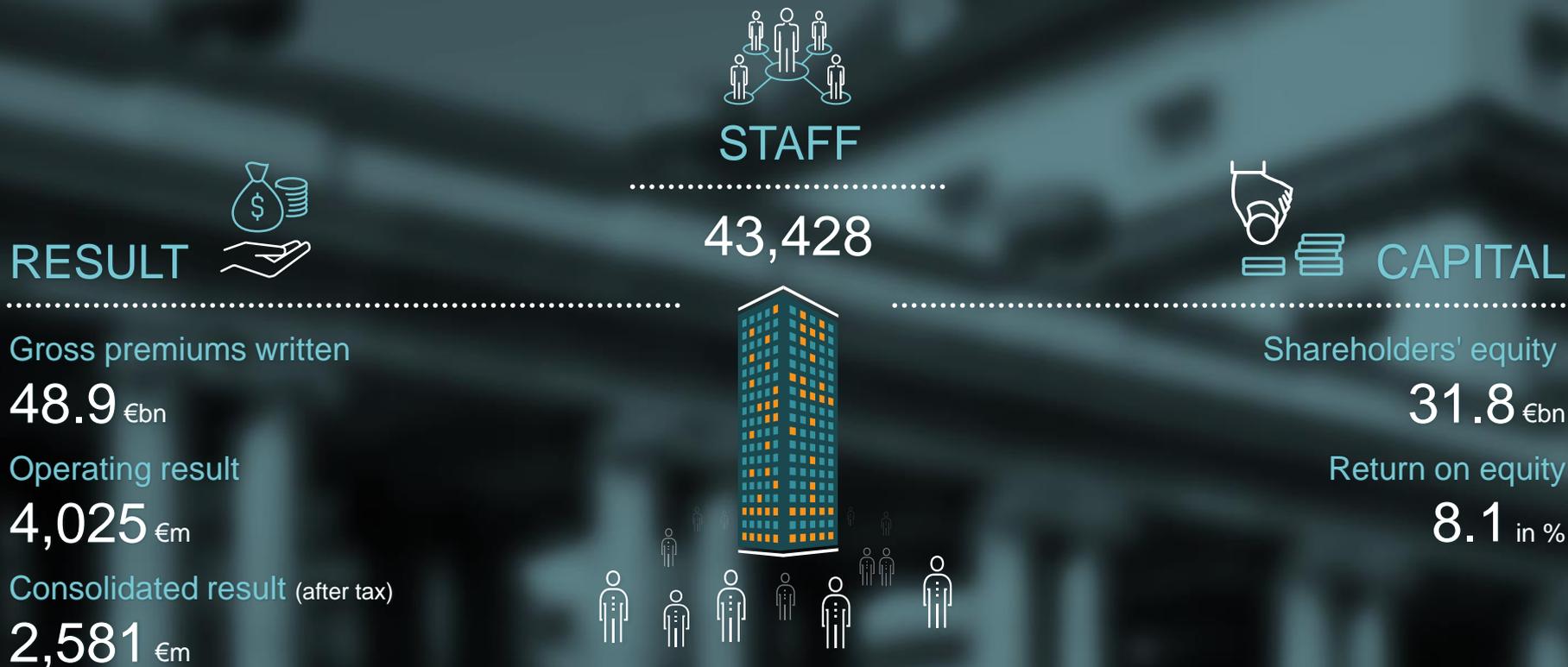VORSORGE Lebensversicherung   nexible   DAS

Asset Management

MEAG

Key figures
Annual Report 2016

STAFF

43,428

RESULT

Gross premiums written

48.9 €bn

Operating result

4,025 €m

Consolidated result (after tax)

2,581 €m

CAPITAL

Shareholders' equity

31.8 €bn

Return on equity

8.1 in %

Munich Re is present in all markets

Amelia
Atlanta
Chicago
Columbus
Hartford
Montreal
New York
Philadelphia
Princeton
San Francisco
Toronto
Vancouver

London
Madrid
Malta
Milan
Moscow
Munich
Paris
Zurich

Beijing
Calcutta
Dubai
Hong Kong
Kuala Lumpur
Mumbai
Seoul
Shanghai
Singapore
Taipei
Tokyo

Bogotá
Buenos Aires
Caracas
Mexiko
Santiago de Chile
São Paulo

Accra
Cape Town
Johannesburg
Nairobi
Port Louis

Auckland
Melbourne
Sydney

Munich Re has a high expertise in several lines of business

Image: shutterstock.com
MARINE

Image: Fotosearch
SPACE

Image: shutterstock.com
NAT CAT

Image: Fotosearch
LIFE & HEALTH

Image: shutterstock.com
ENGINEERING
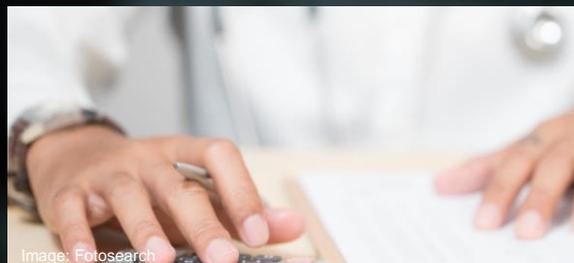
Image: unsplashed
BIG EVENTS

Munich Re actively shapes the transformation of the (re-)insurance industry

Munich RE

New trends & risks

Digitisation

Longevity

Climate Change

…

MARKETS

NEW

ESTABLISHED

Emerging markets

New products for emerging risks

Traditional reinsurance business

Incremental innovations

ESTABLISHED

NEW

PRODUCTS

Efficiently running the traditional book while continuously exploring new products and markets

Bringing together data and technology with highly skilled people and advanced methods generates value

Data & Technology

Skills & Methods
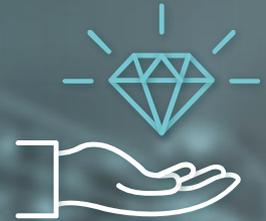
Value

Munich Re's business model requires the full range of analytical methods

Munich RE

Complexity & Information

EXPLAIN THE PAST

PREDICT THE FUTURE

Standard reporting	Ad Hoc OLAP	Statistics	Fore-casting	Classical predictive models	Machine learning	Artificial Intelligence
What happened?		Why did it happen?	What will happen?	To whom will it happen?	To whom will it happen?	To whom will it happen?
Descriptive Analyses Sum, max, min, average, count		Distribution theory, correlation analysis	Time series theory, stochastic processes	Regression models, decision trees	Random forests, SVM	Neural networks

Analytics Suite
Comprehensive Data Analytics Platform for primary health insurers

Munich RE

APPROACH

1. Upload your data ...

2. We add external data ...

3. ... to generate insights ...

Data Insights

Big Data   Actuarial Analytics

Analytics Suite

Sales Analytics   Analytical UW

Claims Analytics

4. ... you access via self service

Insurer

www.munichre.com/analytics-suite

BENEFITS

- Coverage of the whole primary insurance value chain

- Implemented analytics solutions can be applied without additional IT investments and very low efforts

- Advanced Analytics is used to gain new insights in the portfolio, individual members and individual providers

- Results are prepared in very easy-to-use visualisations through dynamic reports
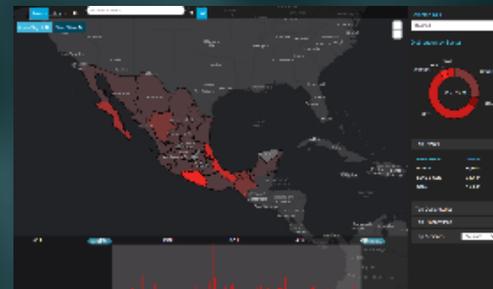
M.IN.D.
Risk Management Platform for NatCat Pools

Munich RE

RESULTS

Loss Adjuster

Reporting   Analytics

M.I.N.D.   **Risk Management**

Hazards

Exposure

BENEFITS

- From "no information" to "all information at once"

- Maximum transparency on all exposures

- Database allows in-depth trend detection
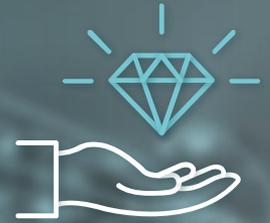
- Faster & more effective claims management