



FICHTNER

Fichtner Digital Grid - Integrated Solution Portfolio for Distribution System Operators

BW-I: Intelligent grid planning and real-time monitoring systems securing grid stability in Japan



Established in 1922 and family-owned ever since



Project experience in more than 170 countries



Total turnover of €246 million in 2017



More than 1500 employees worldwide – over 500 of these in our home office



Long-standing employees from 66 nations



Certified systems for quality, workplace health, safety, compliance, environmental protection

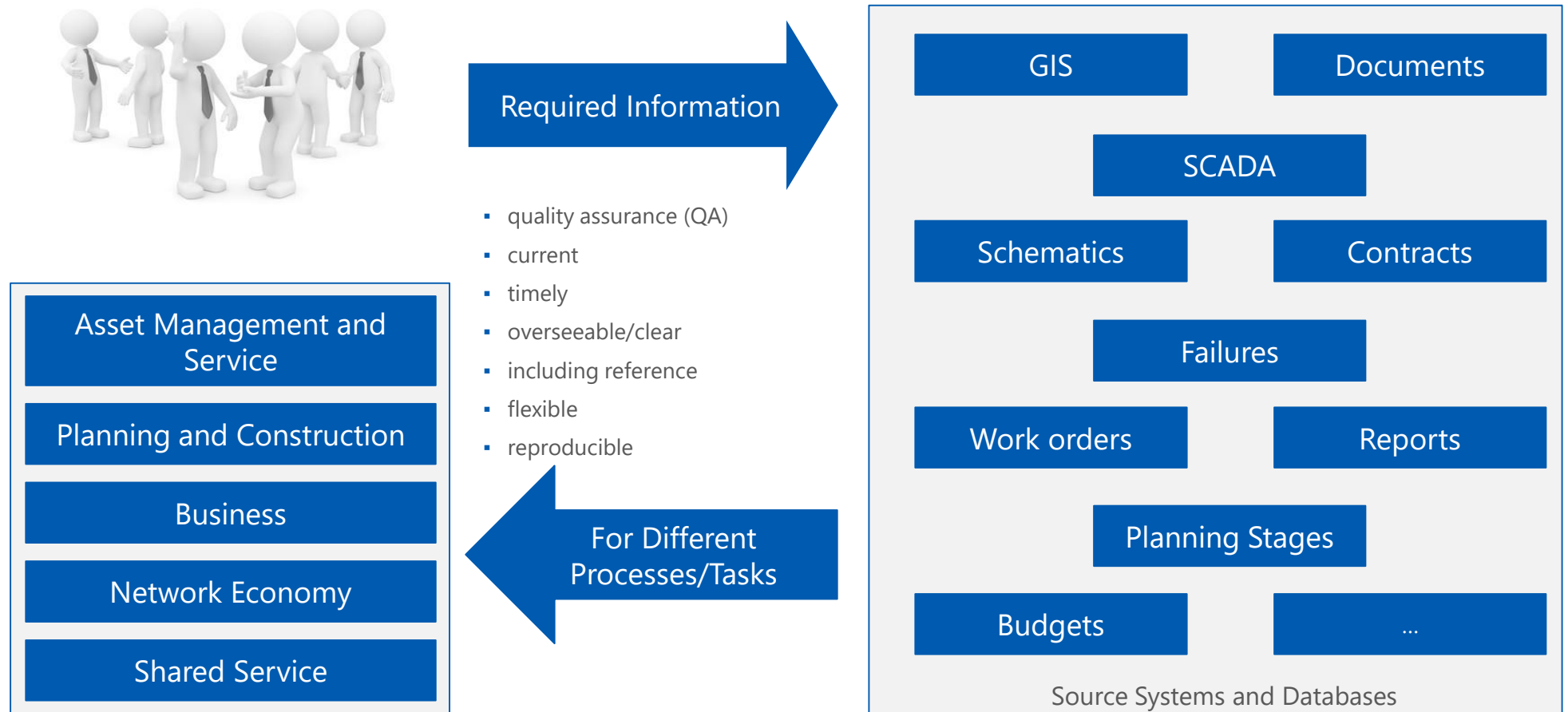
Paradigm Shift

The market changes in the energy sector: digitization, regulation, new business models

- introduction of new consumers such as **electric vehicles** and **heat pumps**
- new **storage** technologies
- increasing **decentralized power generation**
- **aging** of the facilities
- complex **legislation**
- new **business models** and value-added services
- many new and diverse **market participants**

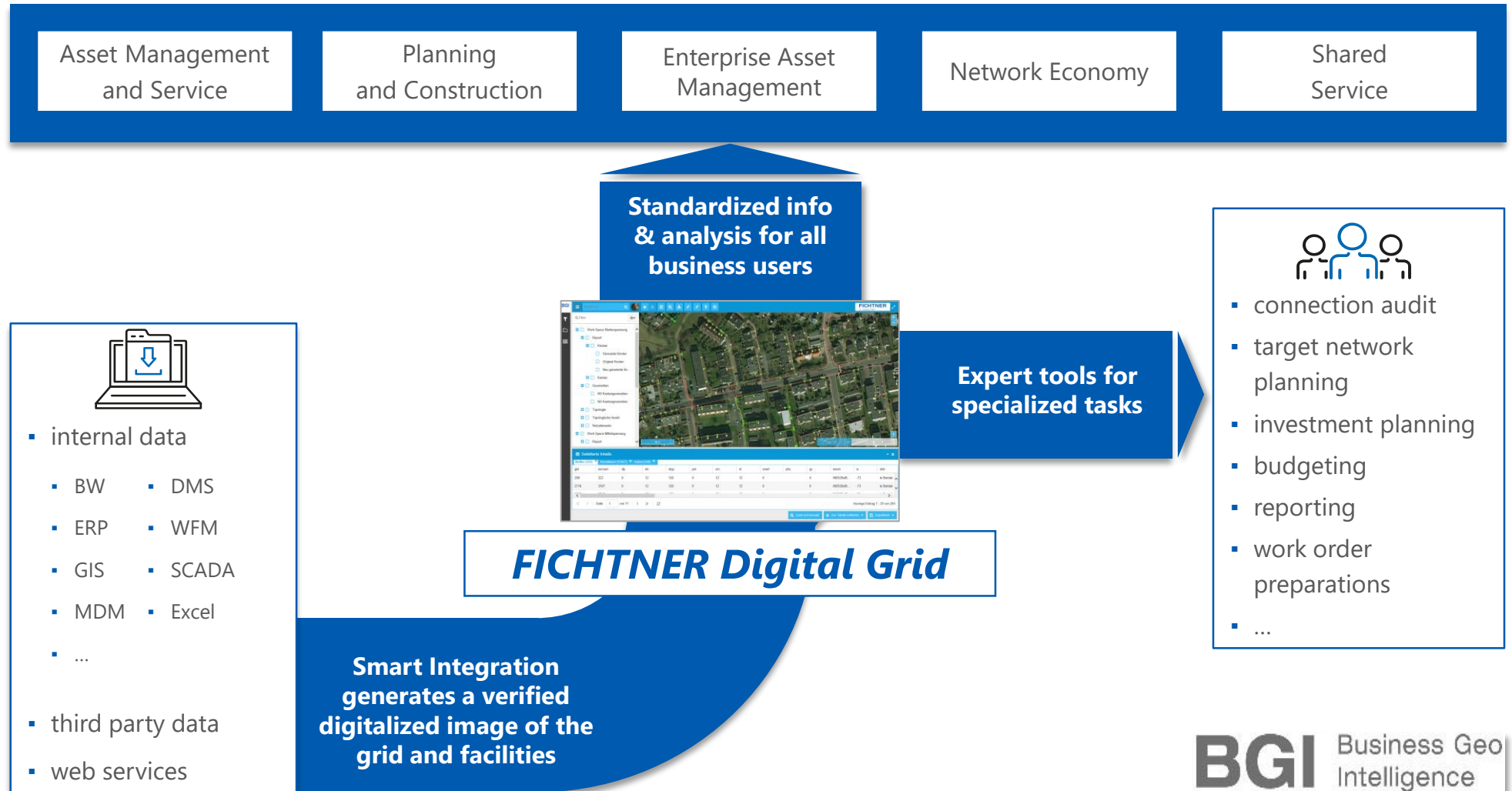
Paradigm Shift

Grid operators need up-to-date and reliable information to meet their requirements



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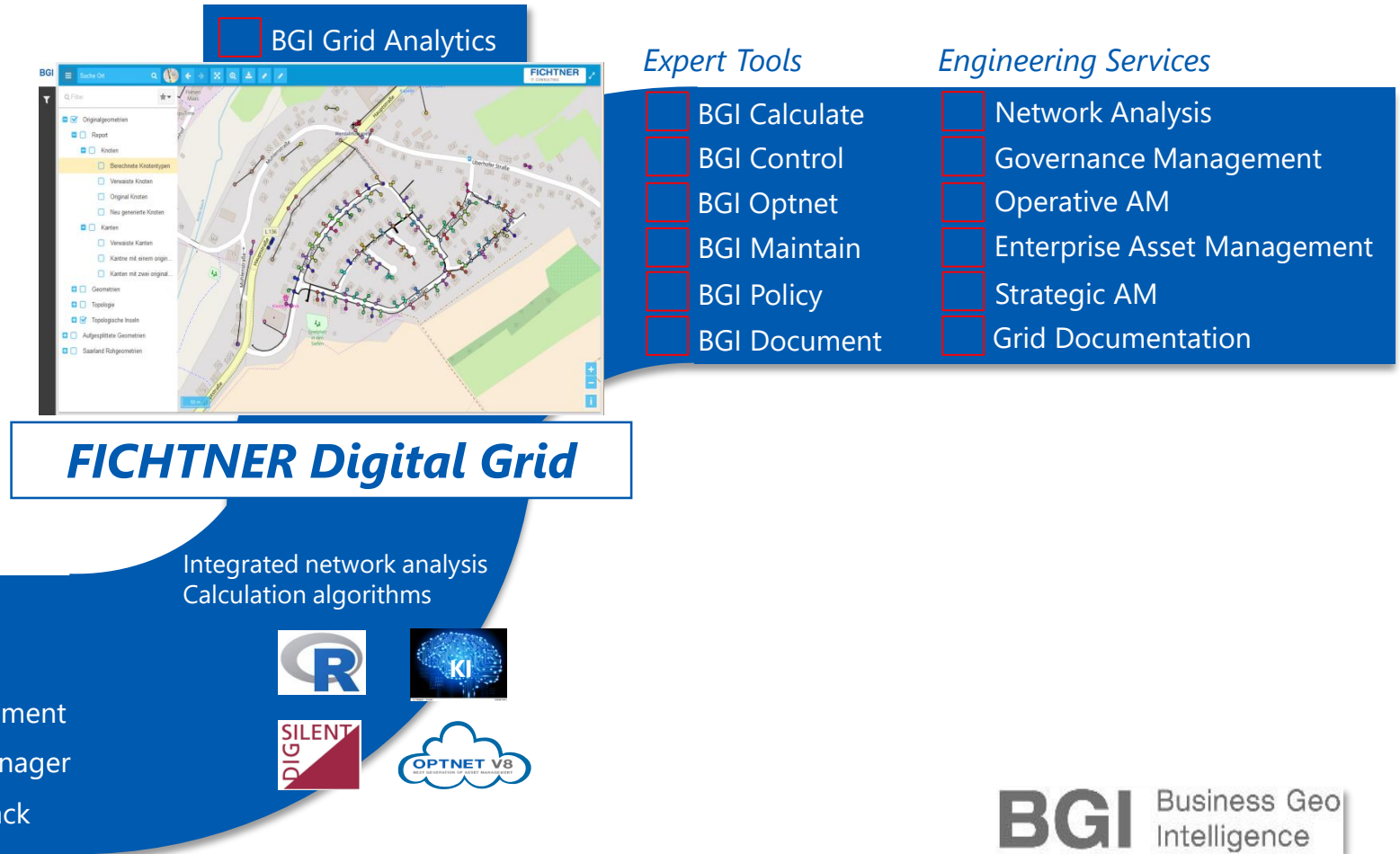
accomplishes comprehensive process support and provides expert modules



BGI Business Geo Intelligence

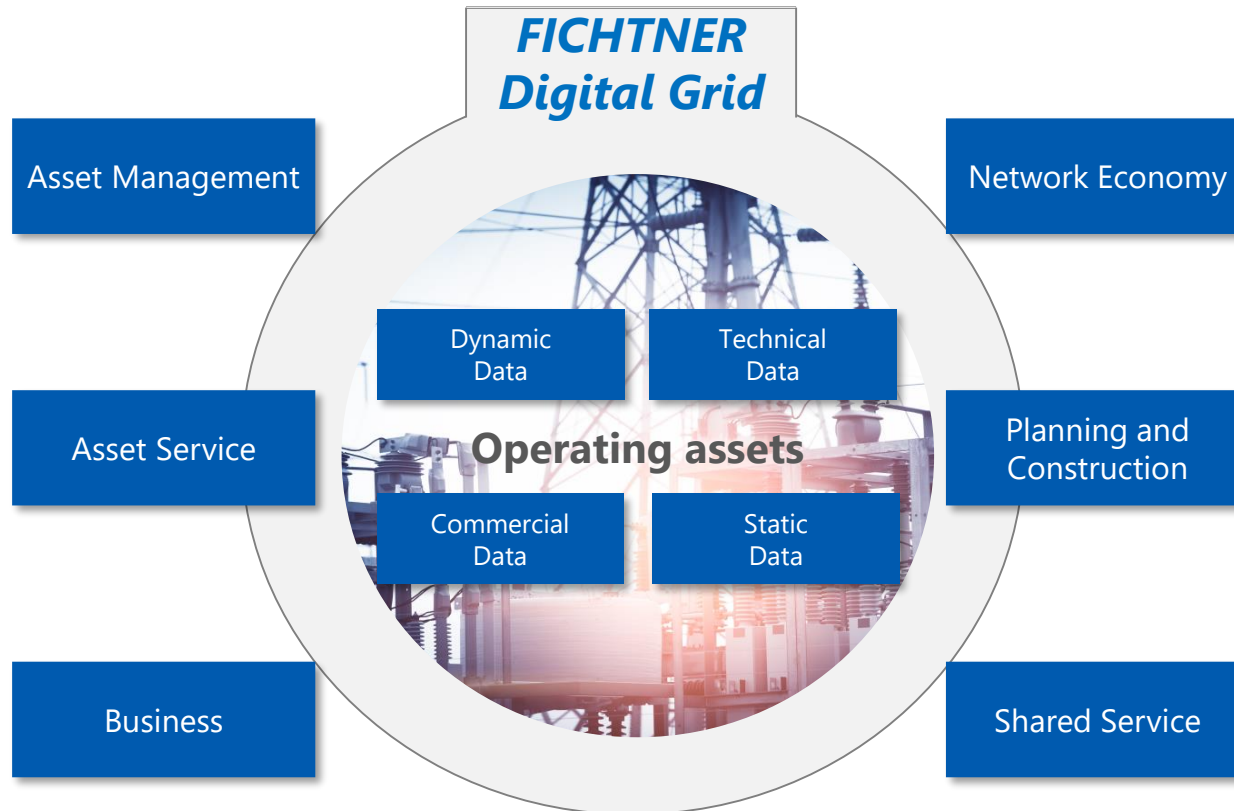
FICHTNER Digital Grid

has a modular structure and integrates into existing environments in line with the actual demands



FICHTNER Digital Grid

offers a synchronized, cross-process view of all facilities in the grid



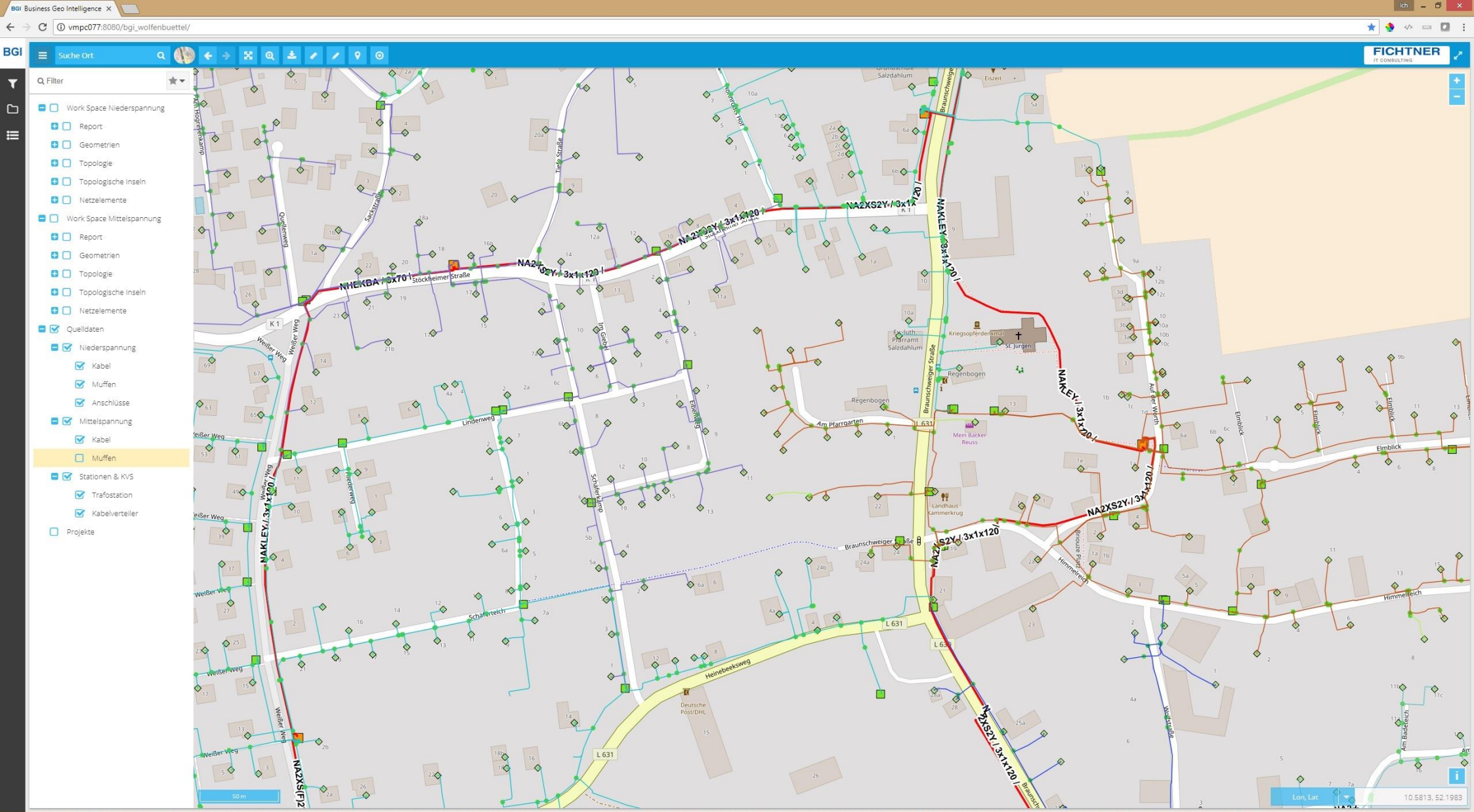
Typical Questions

- Which loads are caused by the currently approved new PV systems on a sunny day?
- In what condition is a facility and are there plans for third-party construction in the area?
- What kind of failures did we have in the concession area last year and what were the causes?
- Which property situations need to be taken into account when re-planning?
- ...

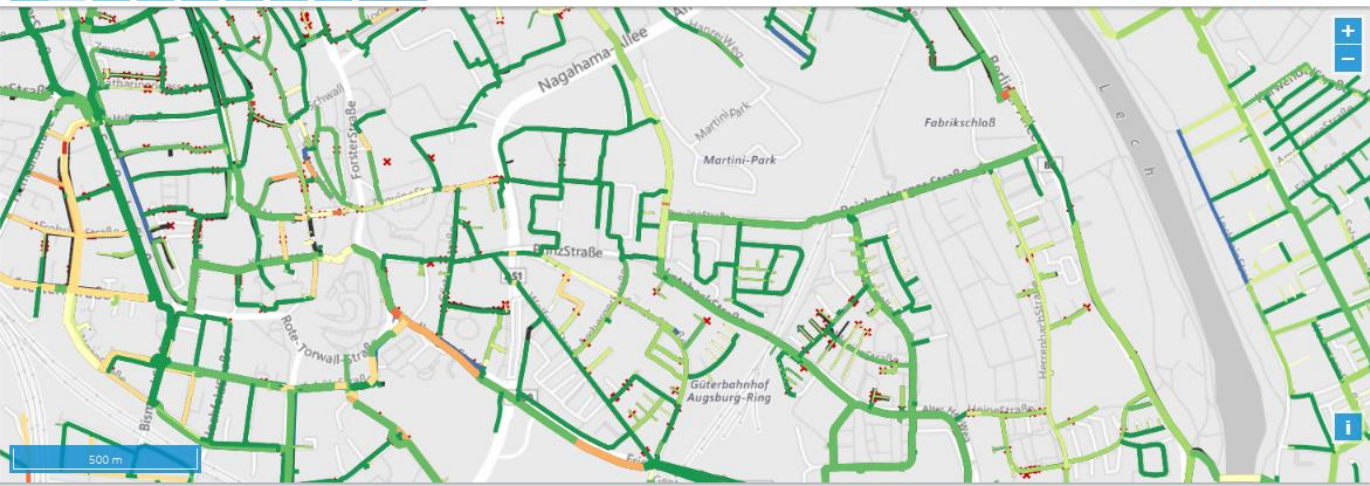
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FICHTNER supports the introduction of the platform with a set of comprehensive consulting services





- Q Filter
- Wasserversorgung
 - Leitungen | Attribute
 - Leitungen | Einflussfaktoren
 - Leitungen | Ergebnisse
 - Ausfallwahrscheinlichkeit
 - Wichtigkeit
 - Restnutzungsdauer
 - Alterungsmodell
 - Leitungen | Maßnahmen
 - Schäden
 - Schäden | Alterung



Analyse

Jahr: 2050

Alterungsmodell

Diagramm anzeigen

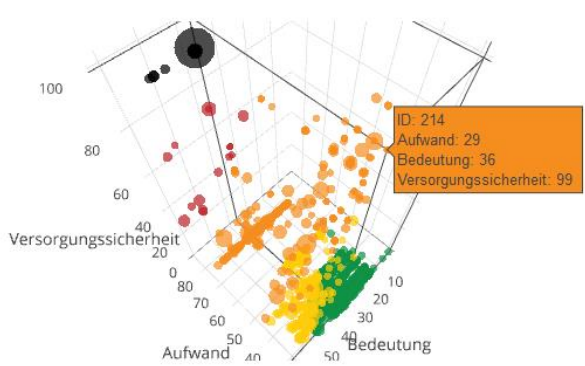
Bestand

Diagramm anzeigen

Legende

Ausfallwahrscheinlichkeit

↗	<= 1.00, NW <80 (0)
↘	< 1.00, 80 <= NW < 200 (0)
↖	< 1.00, NW >= 200 (0)
↗	< 0.90, NW <80 (0)
↘	< 0.90, 80 <= NW < 200 (0)
↖	< 0.90, NW >= 200 (0)
↗	< 0.80, NW <80 (0)
↘	< 0.80, 80 <= NW < 200 (1)
↖	< 0.80, NW >= 200 (0)
↗	< 0.70, NW <80 (0)
↘	< 0.70, 80 <= NW < 200 (3)
↖	< 0.70, NW >= 200 (2)
↗	< 0.60, NW <80 (0)
↘	< 0.60, 80 <= NW < 200 (9)
↖	< 0.60, NW >= 200 (2)
↗	< 0.50, NW <80 (0)
↘	< 0.50, 80 <= NW < 200 (24)
↖	< 0.50, NW >= 200 (3)
↗	< 0.40, NW <80 (0)
↘	< 0.40, 80 <= NW < 200 (18)
↖	< 0.40, NW >= 200 (18)



- sehr unwichtig
- unwichtig
- mittel
- wichtig
- sehr wichtig

BGI Suche Ort

FICHTNER Digital Grid

BGI Calculate

Q Filter

- Eigene Kunden
- EVE
- e'net
- Grid
 - Gebäude
 - Versorgungsobjekt
 - Gas
 - Gas Leitung-Analyse
 - Gas-Abnehmer
 - Gas-Leitung
 - Strom
 - Hausanschluss
 - Niederspannung
 - SAP-Aufträge Zähler
 - Ausbau
 - Sperrung
 - Wechsel
 - SAP-Aufträge Hausanschl...
 - PV-Anlagen
 - Netzprognose
- Social Media
- Wetter
- Vertriebsregionen
- OSM-Daten
- Marktdaten

100 m Lon, Lat

Projektkonfiguration

Projekt:

Variante:

Iteration:

Szenariokonfiguration

Szenario:

Grid

Grid Analytics

Wichtigkeit (0% 70%
=unwichtig, 100%=wichtig):

Zustand (0% 40%
=schlecht, 100%
=gut):

Netzzustandsprognose

Zeiträumen für Blitze



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