



ООО «4TECT»

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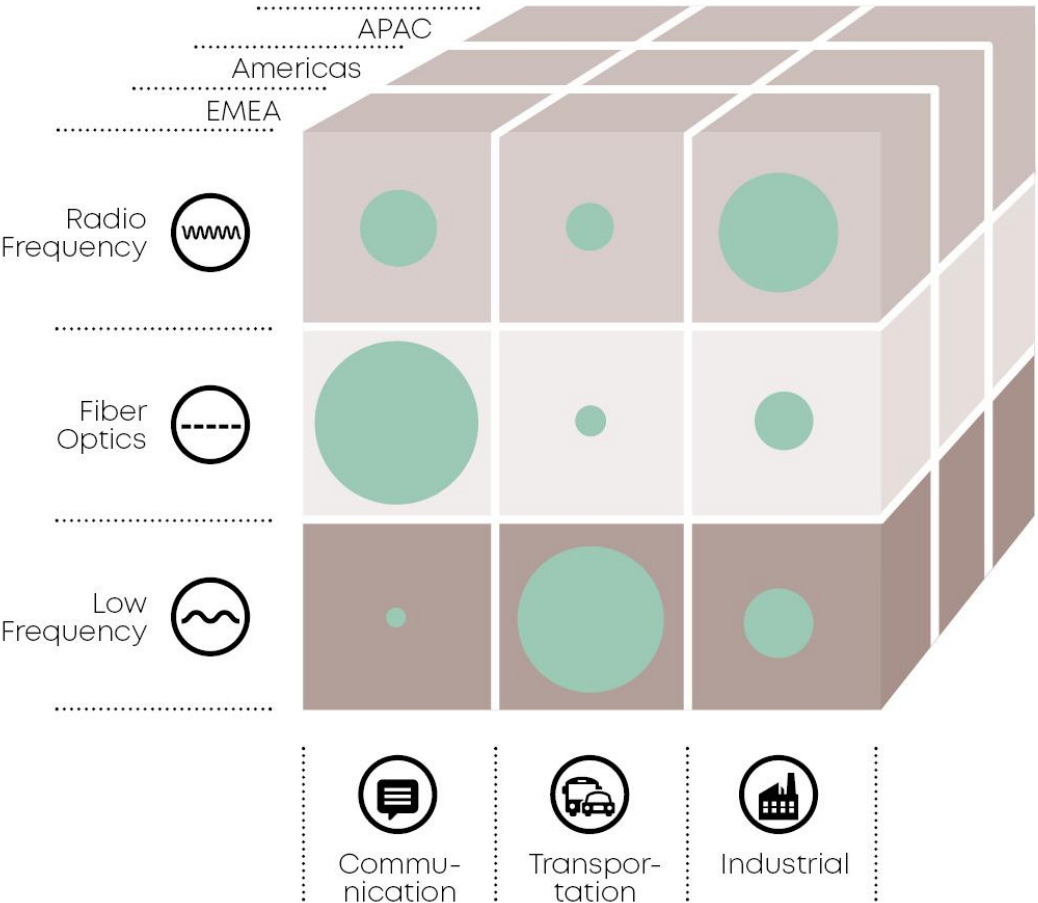
info@4test.ru

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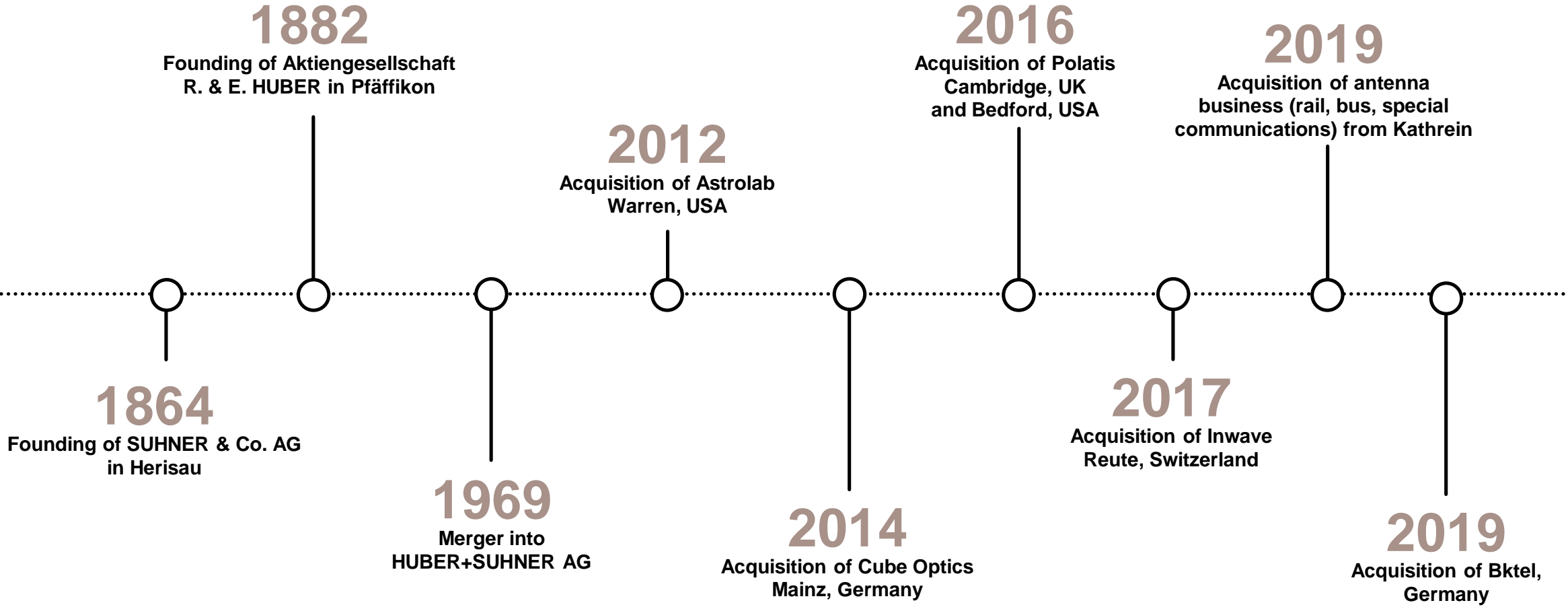
HUBER+SUHNER

Facts & figures

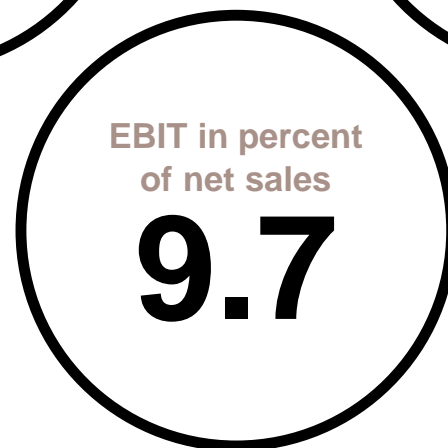
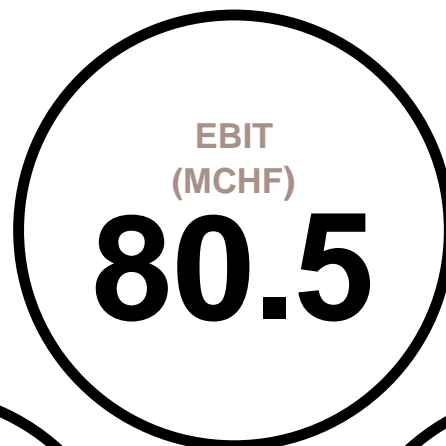
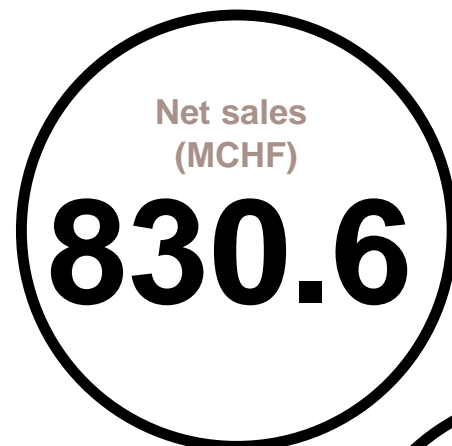
The three dimensions of our business



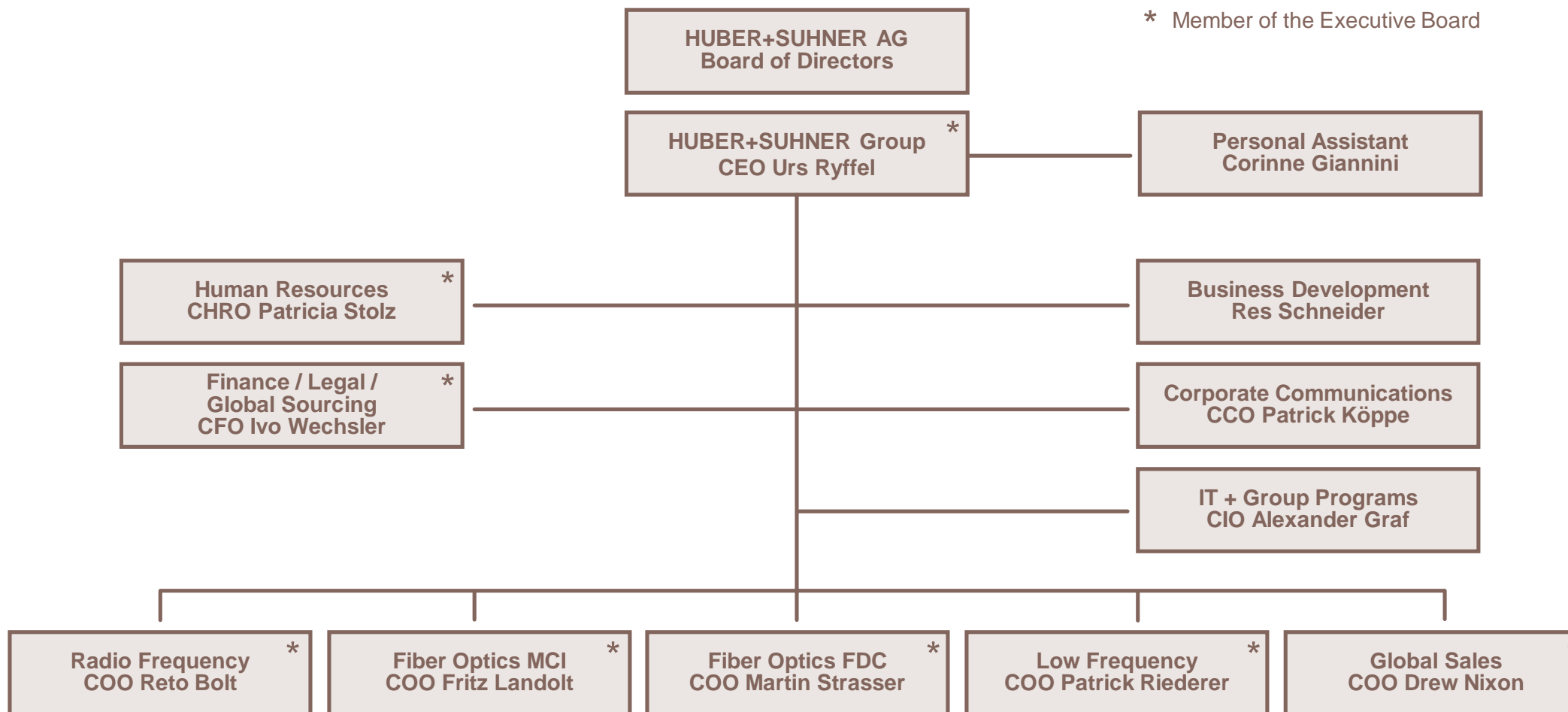
Company history



Key figures at a glance 2019



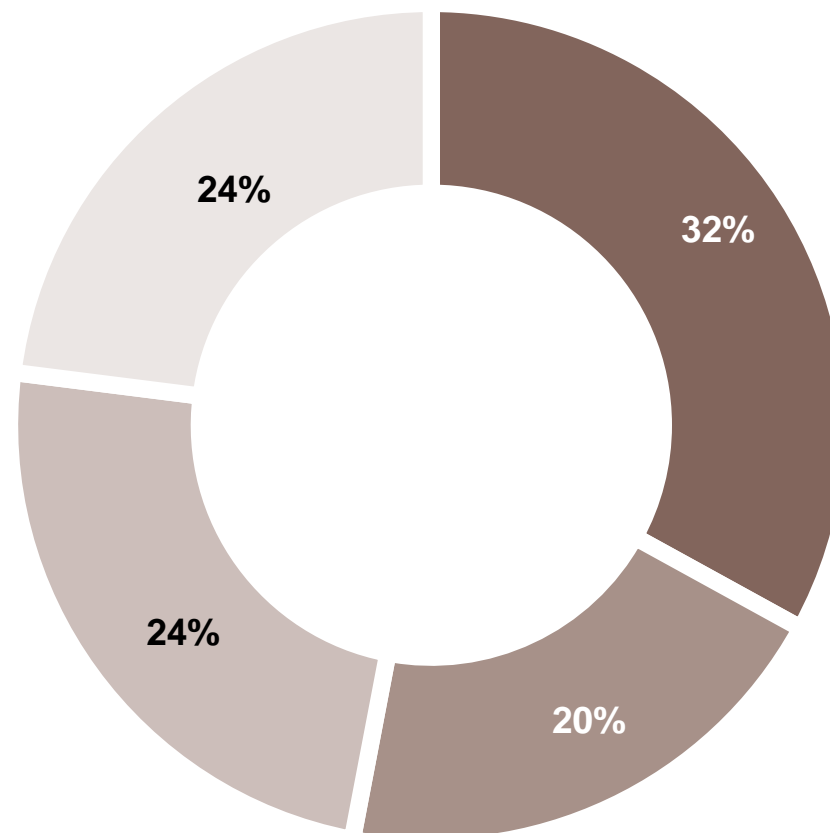
Organisation



Strong shareholder base

Approx. 4,800 shareholders

- Significant shareholders
- Institutional
- Private investors
- Not registered



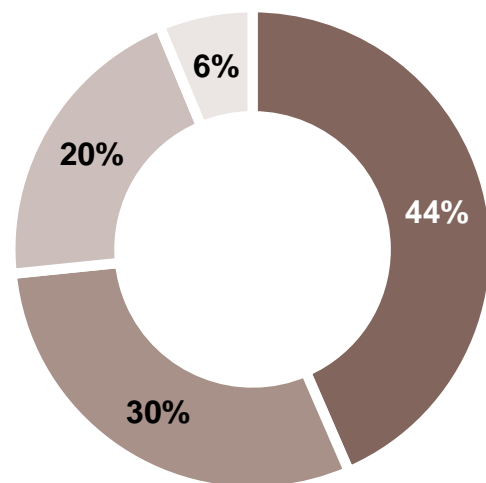
Significant shareholders (>3%)*

- Metrohm AG 10.6%
- EGS Beteiligungen AG 9.2%
- S. Hoffmann-Suhner 6.2%
- Norges Bank 3.7%
- Huwa Finanz- und Beteiligungs AG 3.2%

* as of 1 April 2020

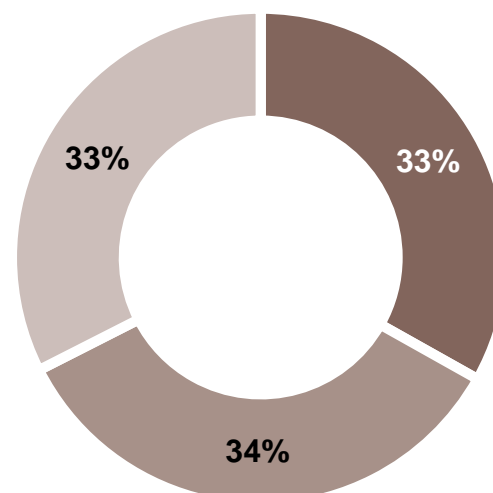
Net sales of MCHF 830.6 – 2019 distribution

by region



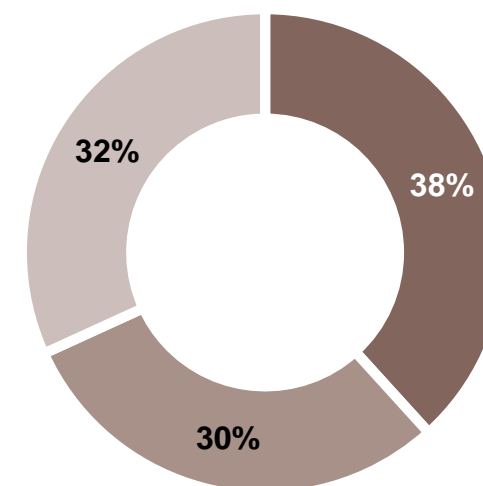
- EMEA
- Asia-Pacific
- Americas
- Switzerland

by technology segment



- Radio Frequency
- Fiber Optics
- Low Frequency

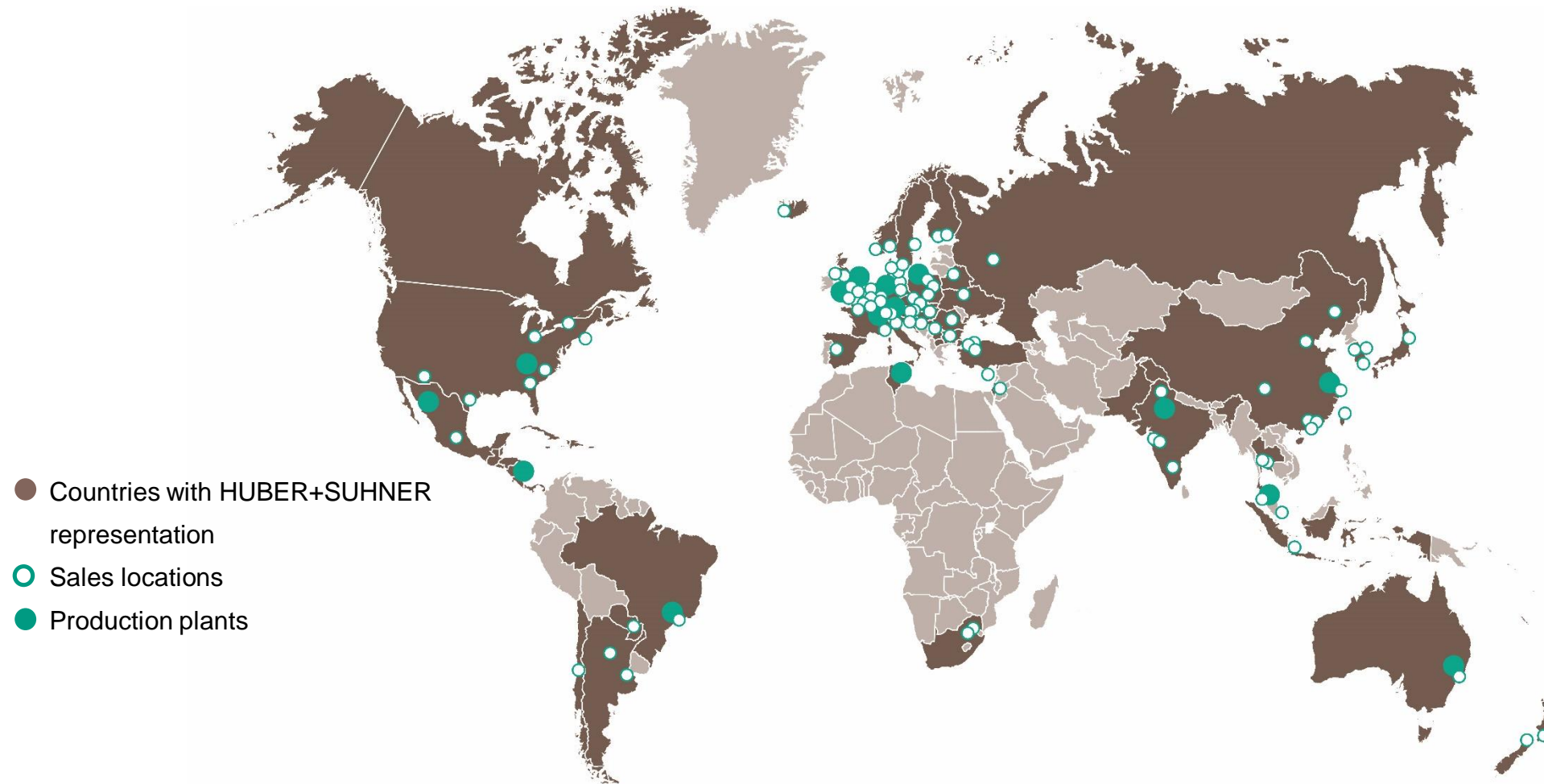
by market



- Communication
- Transportation
- Industrial

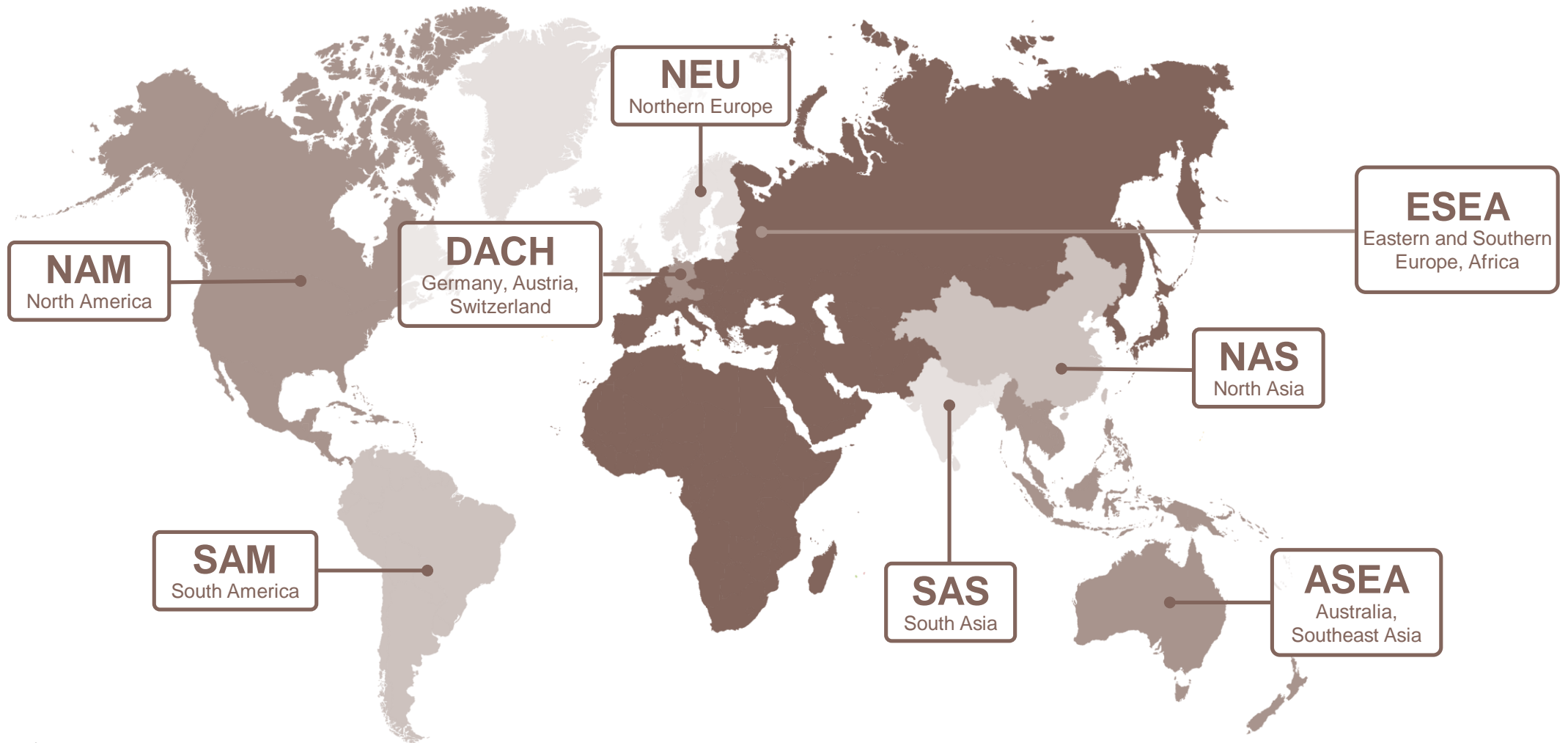
Global network

Sales, engineering and production



Sales regions

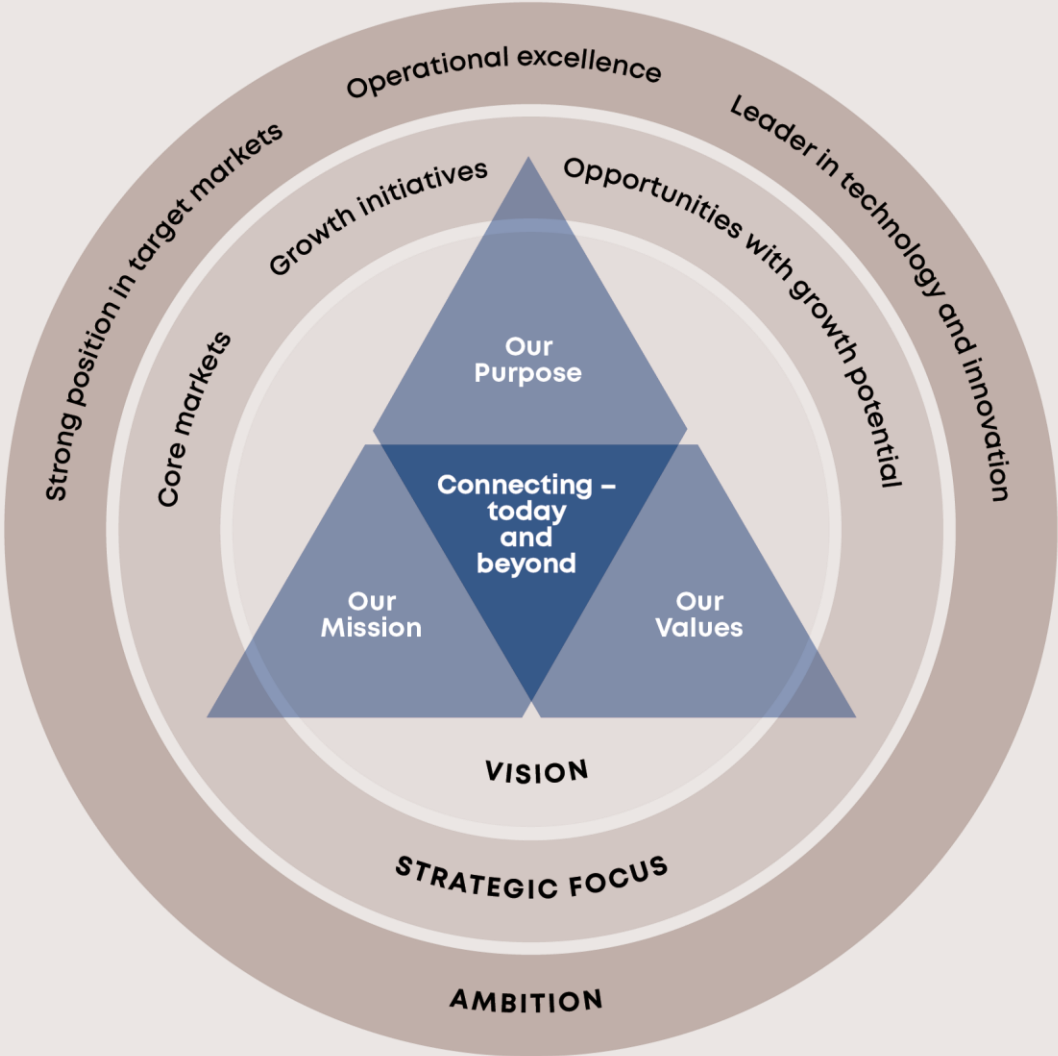
Local expertise for individual customer solutions



Our Fundamentals

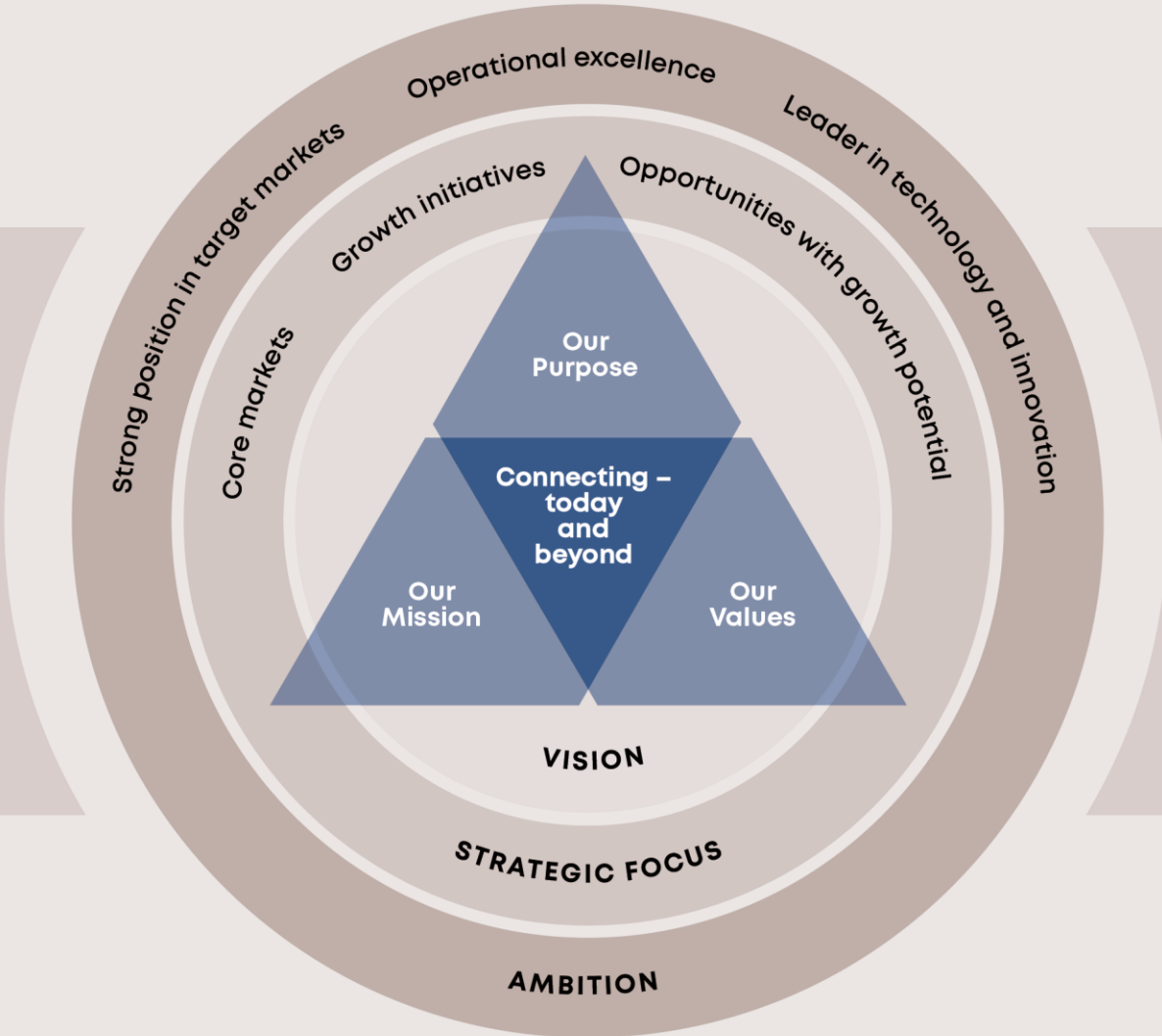


Our Fundamentals



Our Fundamentals

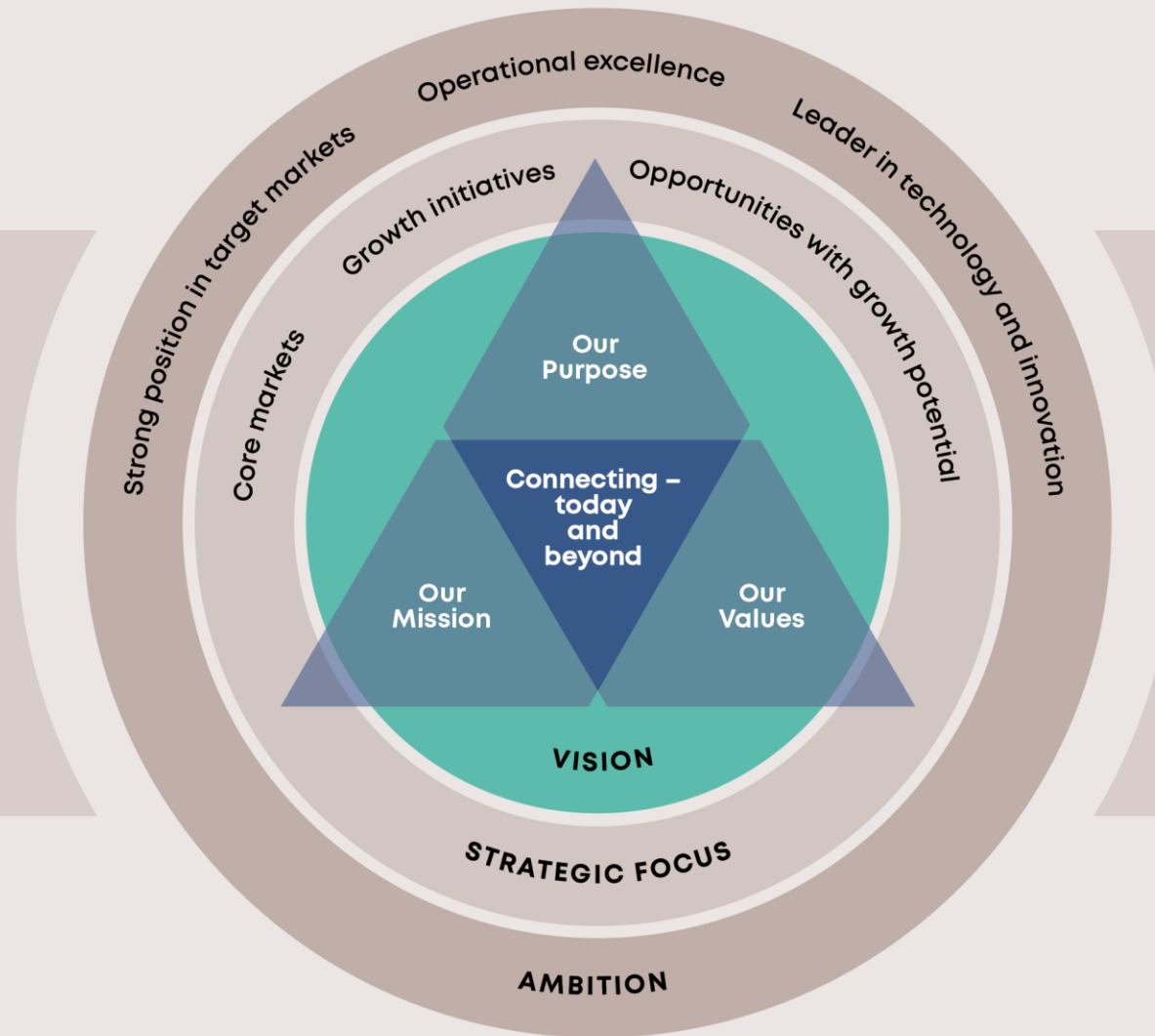
CUSTOMERS
Needs and expectations



MARKETS
Trends and competition

The dimensions of our vision

CUSTOMERS
Needs and expectations



MARKETS
Trends and competition


The dimensions of our vision




To be connected is a prerequisite for the functioning of our globalised economy and society. It is also a basic human need. With our connectivity solutions, we help our customers to bring people closer together. Today and beyond.


The dimensions of our vision




- 

We operate globally in three target markets and three technologies. This is our **3x3 strategy**.
- 

We **align the company with the relevant trends** regarding market positioning, company culture, and value creation.
- 

We generate sustainable added value for all our stakeholders with a **long-term focus**.
- 

We take a strong position in our target markets – with a global approach and through **close relationships with our customers**.
- 

We are a leader in innovation and master the key technologies to provide our customers differentiated, high quality and **convincing solutions**.
- 

We **create value for our customers** by enabling them to perform.
- 

We continuously improve our processes and services and create additional differentiation through a **powerful supply chain**.
- 

We have a company culture that promotes outstanding performance on the basis of having **the right people at the right place and common values**.
- 

We have **high ambitions** and want to surpass our set goals regularly.

The dimensions of our vision



Our values promote entrepreneurial spirit and are based on respect for people.

**Trust**

We give and expect trust

**Care**

We take responsibility towards employees, society, and the environment

**Passion**

We strive beyond the expected

**Transparency**

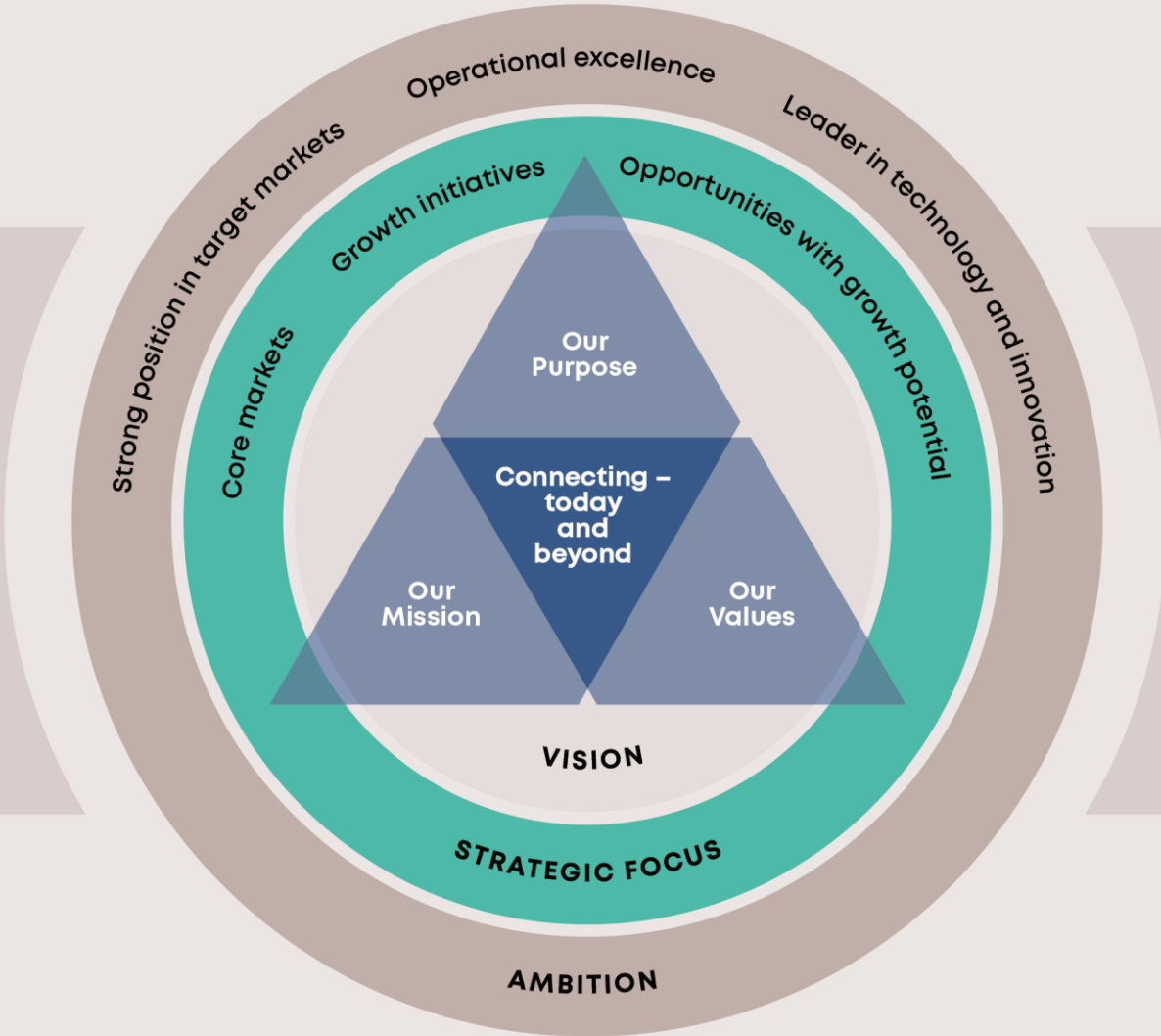
We collaborate openly and honestly

**Accountability**

We take ownership and deliver what we promise

Our strategic focus

CUSTOMERS
Needs and expectations



MARKETS
Trends and competition

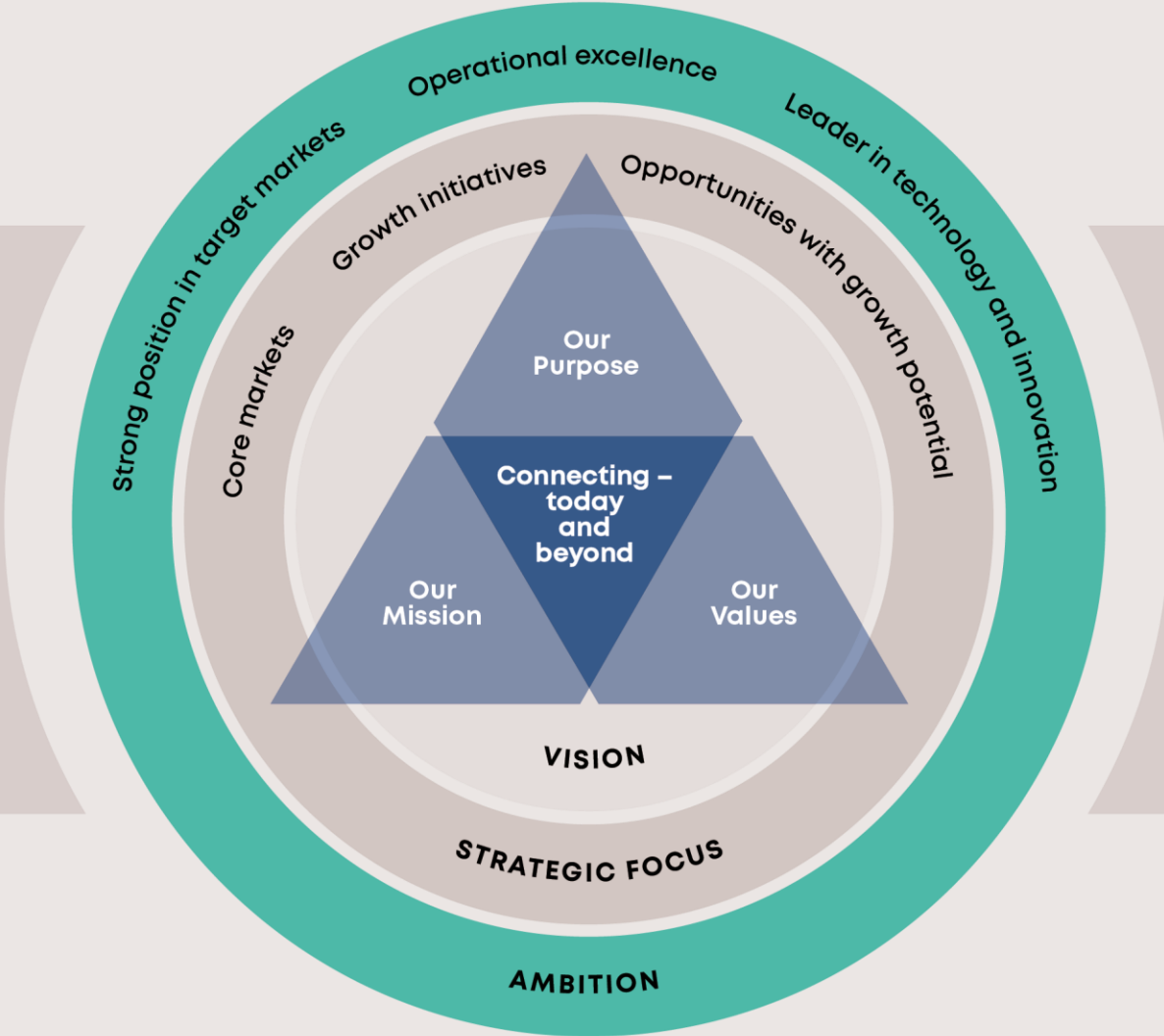
Our strategic focus

We strive for a balanced and focused diversification of our business at all times by managing our current business and developing new opportunities for the future.

- **Core markets**
- **Growth initiatives**
- **Opportunities with growth potential**

Our ambition

CUSTOMERS
Needs and expectations



MARKETS
Trends and competition

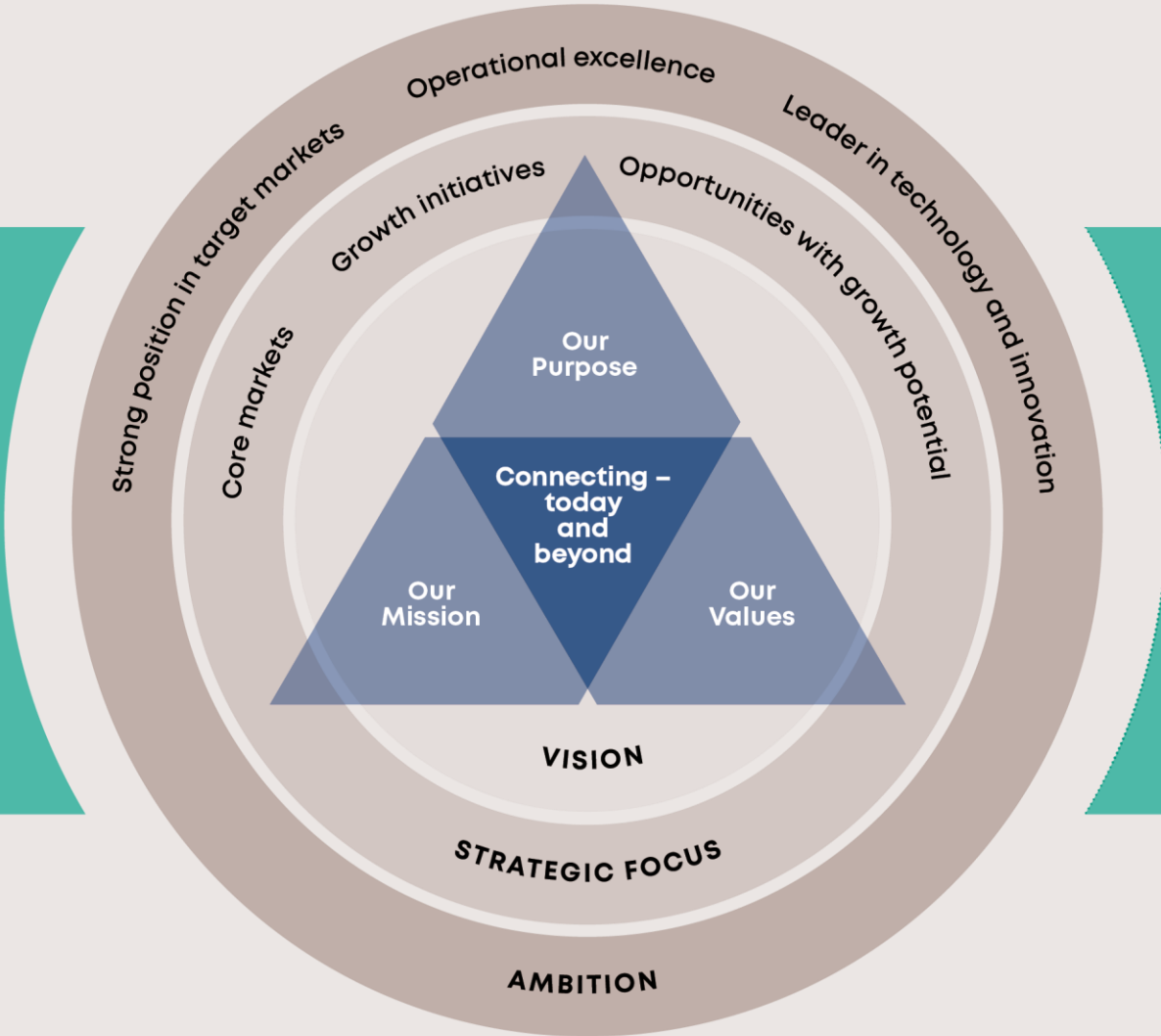
Our ambition

Our ambition is to maintain a best-in-class position within our industry. In the face of ever-changing needs and market trends we operate with agility and are action-oriented in these three key areas.

- **Hold a strong position in target markets**
- **Operational excellence**
- **Be a leader in technology and innovation**

Our customers and markets

CUSTOMERS
Needs and expectations



MARKETS
Trends and competition

Customers

Needs and expectations

With our global sales organisation we are close to our customers. Through this presence, we achieve an outstanding customer knowledge that enables us to provide our customers an excellent end-to-end experience. The customer's needs are thereby the highest priority in our consultative sales approach.

By combining the deep understanding of our customers' needs with our superior product and technology expertise, we are able to outmatch our customers' expectations perpetually.

Customers

Needs and expectations

We also want to be successful in the future and therefore manage the company with foresight. Together with the sustainable, socially committed vision, we lead the company purposefully into the future.

In an ever-changing environment, human needs create trends that offer long-term potential for our company. We focus on those that also address the great challenges of humanity and where connectivity is of great importance.

We know our competitors in our field and are in fair competition with them. Differentiation is achieved by building on our strengths. Our company is open to partnerships with the competition, as long as they result in advantages for our customers and us.

Markets and customers

3 x 3



Choice of approach

Main markets



Strategic focus

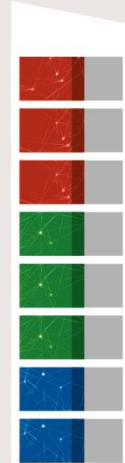
Core markets



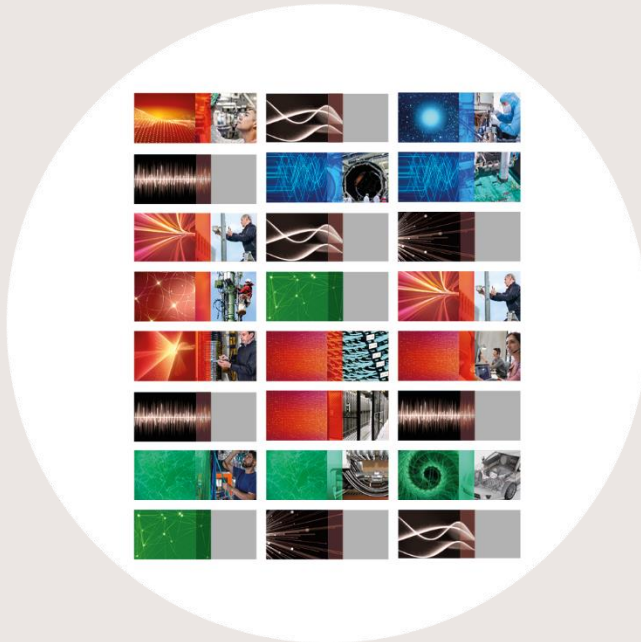
Growth initiatives



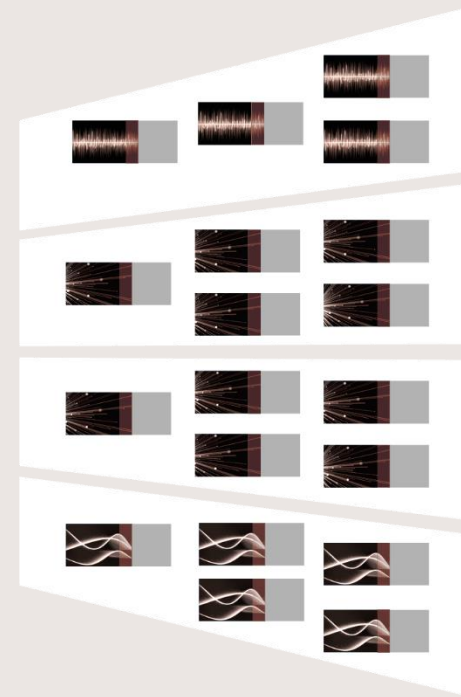
Opportunities with growth potential



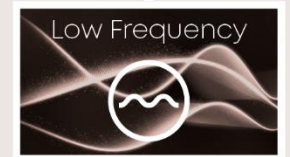
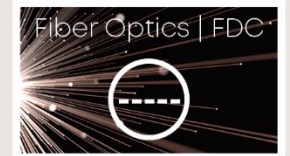
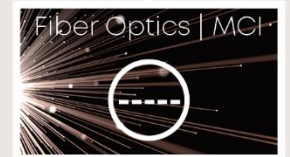
Solutions



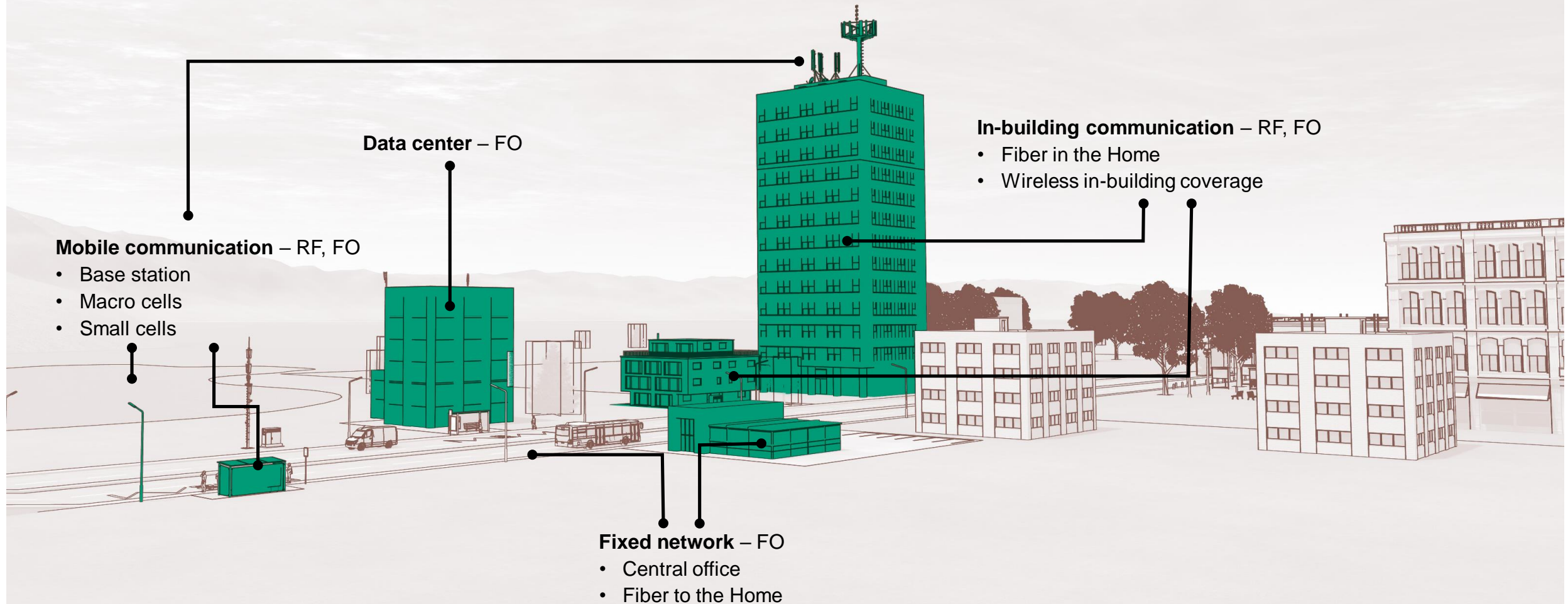
Products



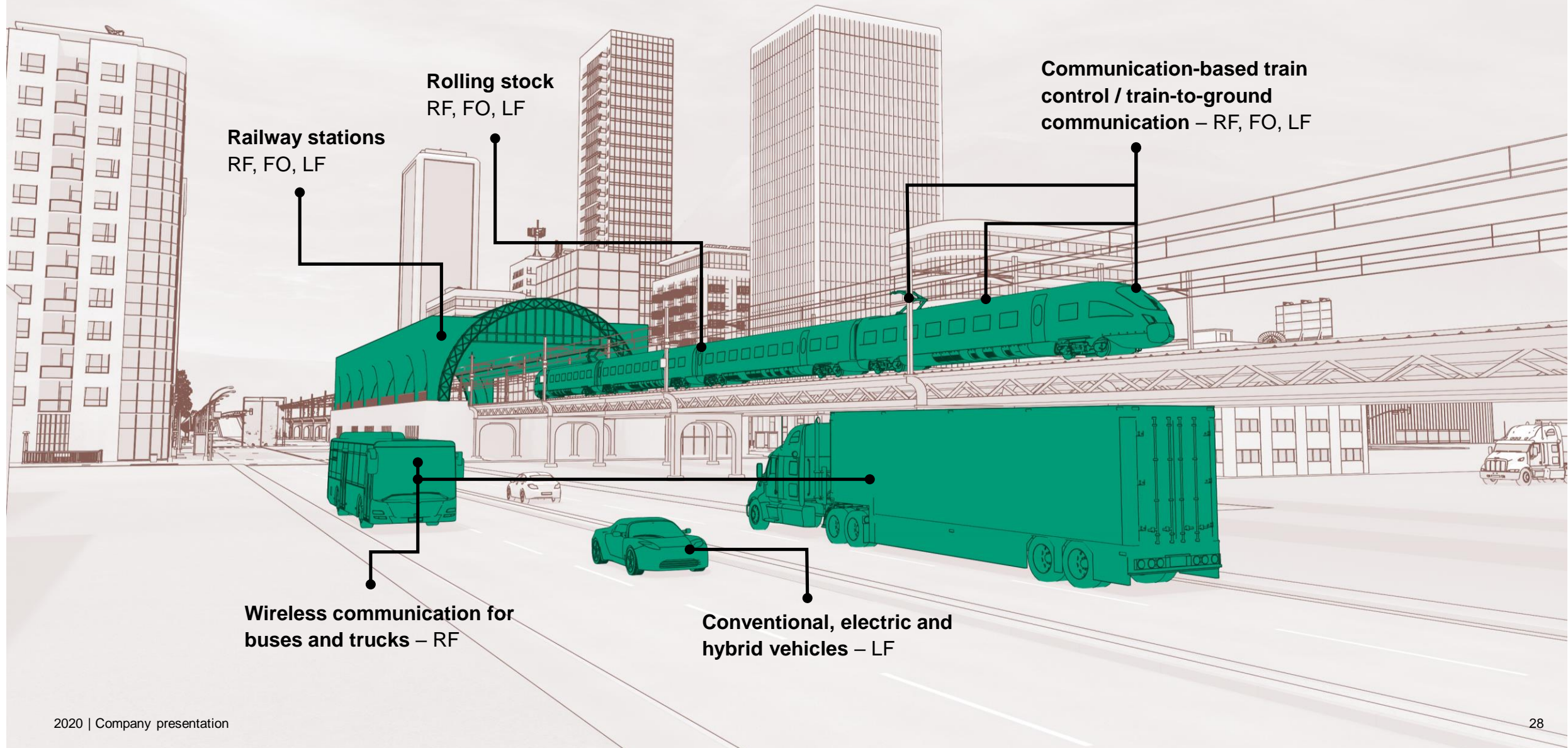
Technology segments / Divisions



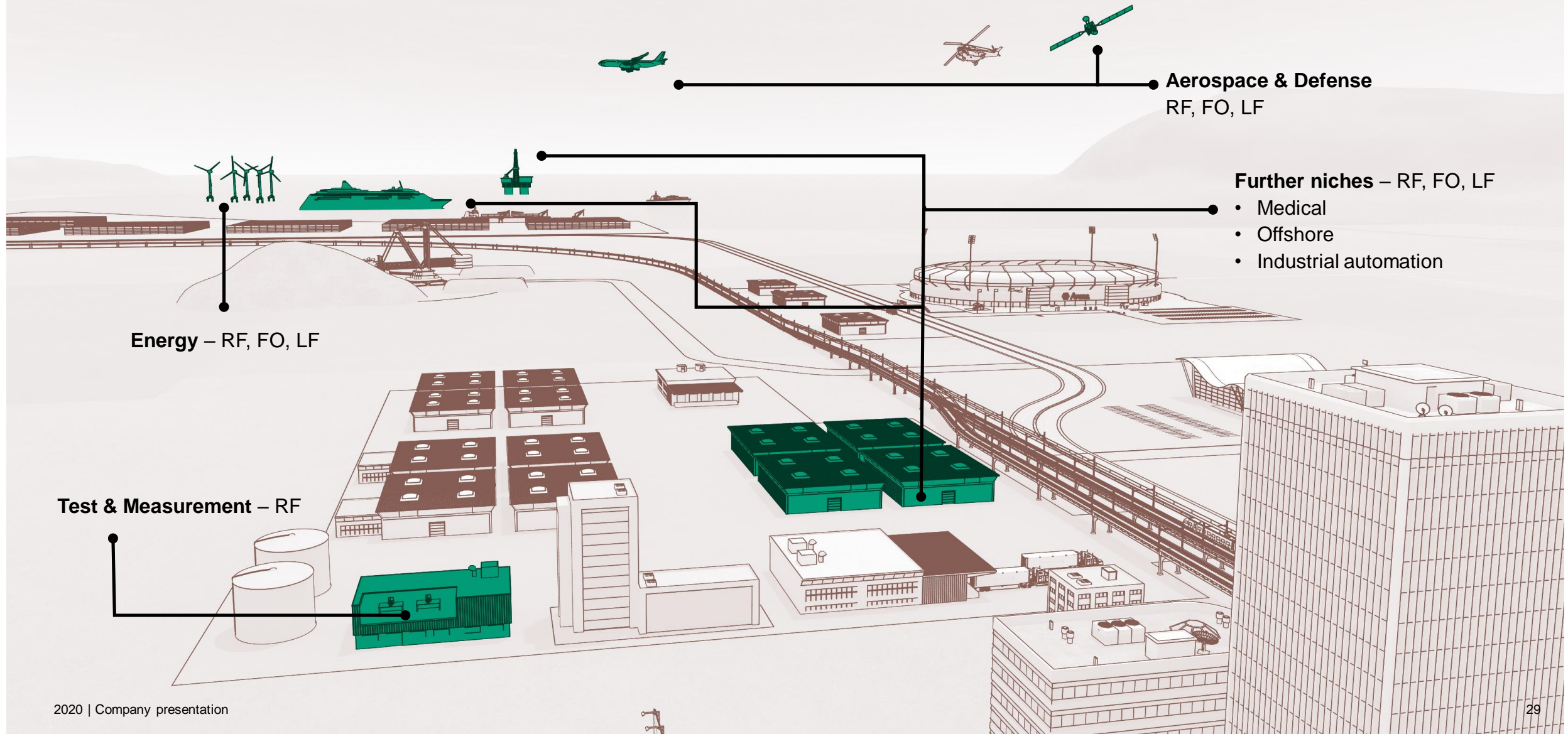
Our solutions for the Communication market



Our solutions for the Transportation market



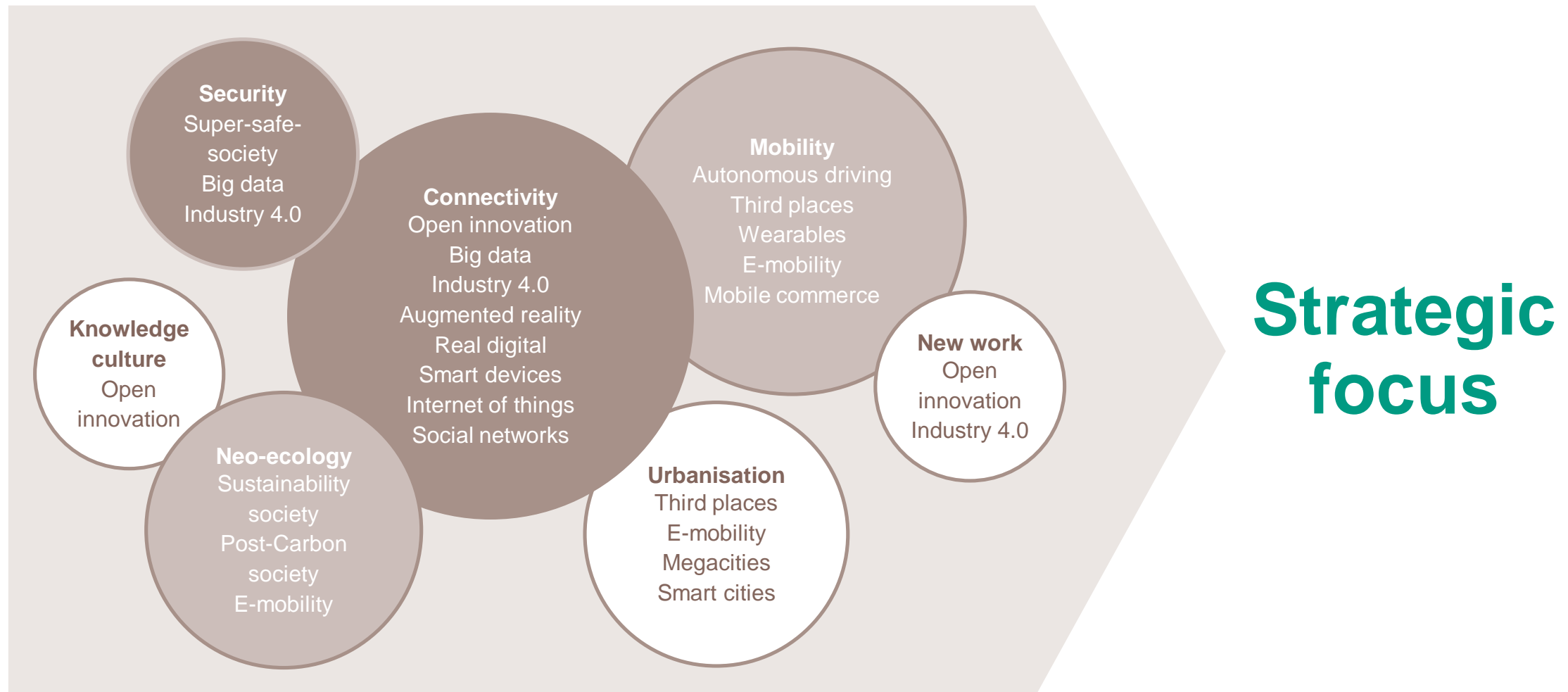
Our solutions for the Industrial market



Further niches – RF, FO, LF

- Medical
- Offshore
- Industrial automation

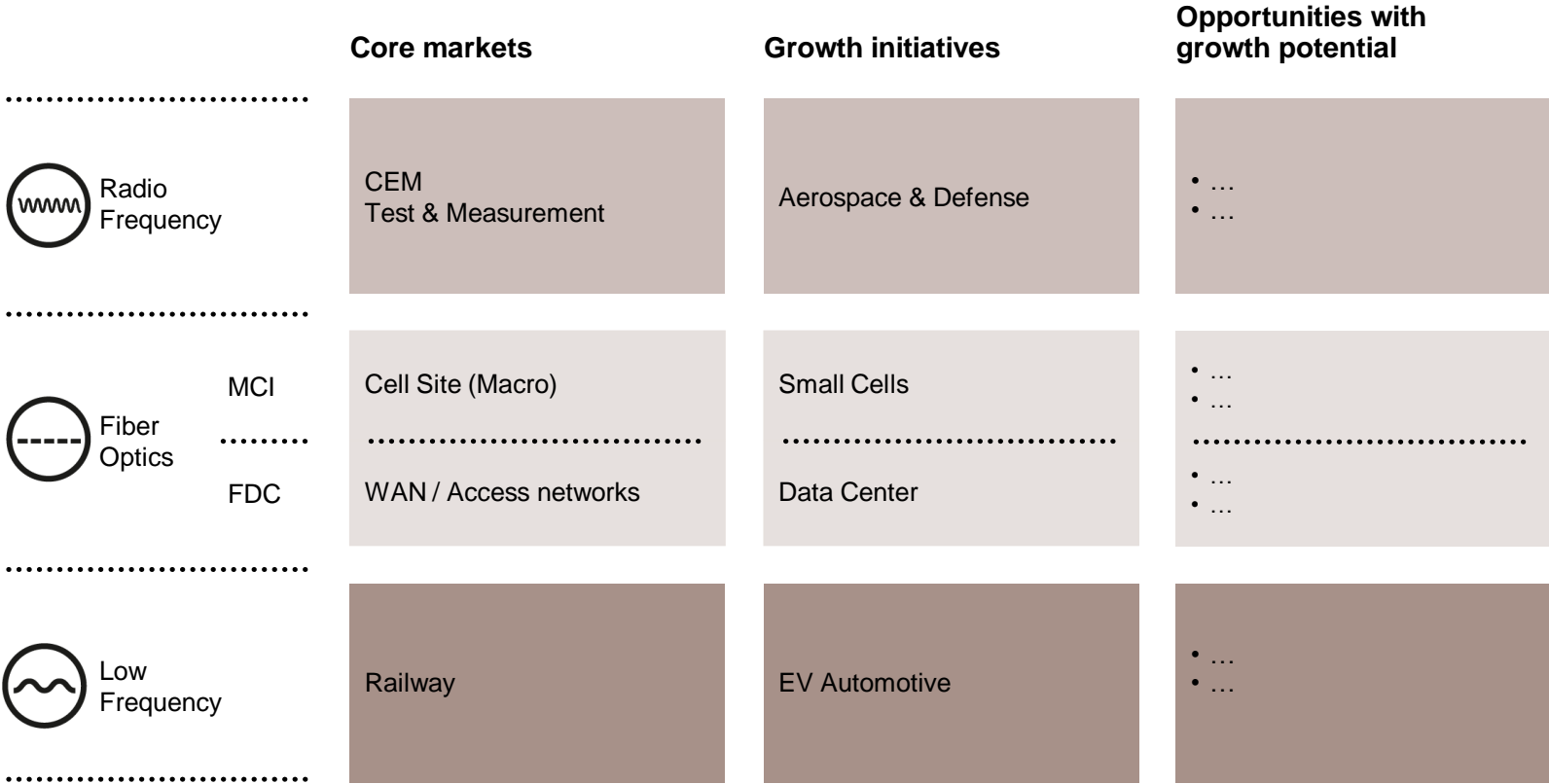
Focused strategy aligned with megatrends



Strategic focus

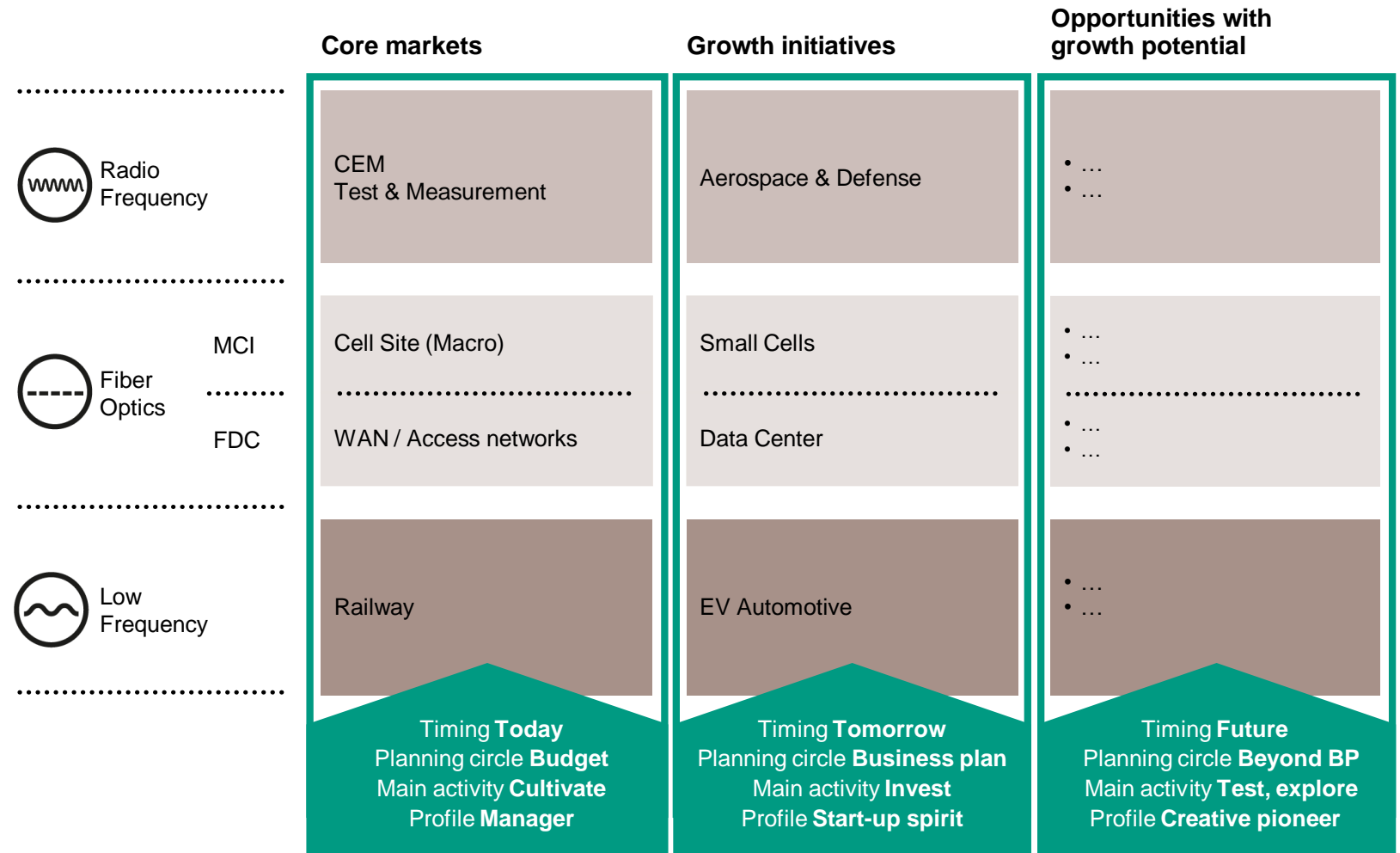
The dimensions of our strategic focus

We strive for a balanced and focused diversification of our business at all times by managing our current business and developing new opportunities for the future.






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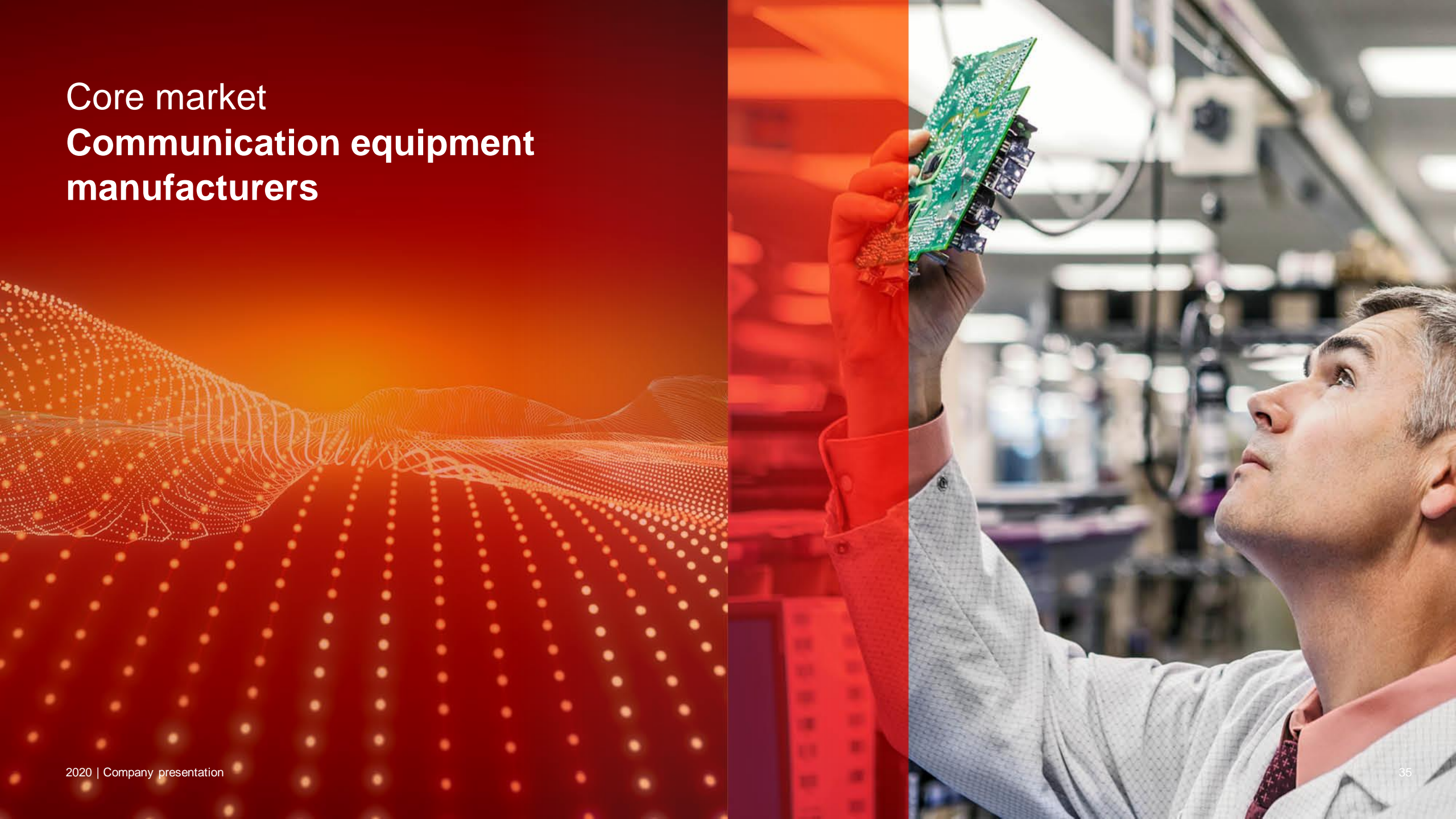


Core markets

Core markets are our foundation. Their turnover is crucial to secure the company we have today in terms of size and setup. Our aim is to be in attractive core markets which allow our company to use all its strengths to take a strong position. Their contributions are essential to meet today's goals and fund our growth initiatives.

	Core markets	Growth initiatives	Opportunities with growth potential
<p>.....</p>  <p>Radio Frequency</p> <p>.....</p>	<p>CEM Test & Measurement</p>	<p>Aerospace & Defense</p>	<ul style="list-style-type: none"> • ... • ...
<p>.....</p>  <p>Fiber Optics</p> <p>MCI</p> <p>.....</p> <p>FDC</p> <p>.....</p>	<p>Cell Site (Macro)</p> <p>.....</p> <p>WAN / Access networks</p>	<p>Small Cells</p> <p>.....</p> <p>Data Center</p>	<ul style="list-style-type: none"> • ... • ... • ... • ...
<p>.....</p>  <p>Low Frequency</p> <p>.....</p>	<p>Railway</p>	<p>EV Automotive</p>	<ul style="list-style-type: none"> • ... • ...

Core market
**Communication equipment
manufacturers**



Communication equipment manufacturers

Extending network coverage and capacity at competitive costs and at a fast pace is made possible by partnering with our customers in technology and innovation.

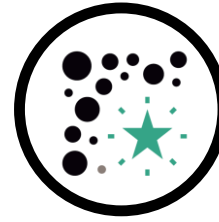
Core market

Communication equipment manufacturers (CEM)



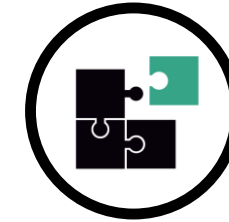
Market trends

- Consolidation in CEM market
- Asia leading the way on price and technology
- From video consumption (4G) to AR, VR, IoT, autonomous driving (5G)



**HUBER+SUHNER
differentiation**

- Technology and innovation
- Best TCO (performance vs cost)
- Global key account structure and flexibility in supply chain



**HUBER+SUHNER
solutions**

- RF board connectivity and antenna interfaces
- FO harsh environment FTTH solutions
- Wavelength-division multiplexer products (WDM)

Ambition: To leverage excellent customer relationships with market leaders to defend strong position in 4G and participate in future 5G platforms

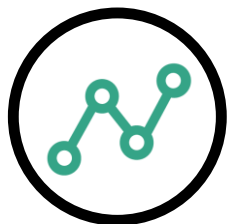
Core market Railway



Railway

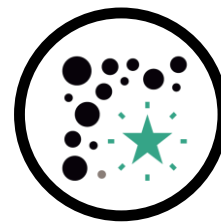
Trains have become highly complex and connected systems running at high speeds. Comprehensive connectivity solutions ensure efficiency, reliability, and safety.

Core market Railway



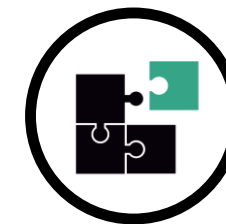
Market trends

- Consolidation in the rolling stock industry progressing
- Standardisation of cables (EN norms)
- Passenger experience and train-to-ground communication becoming more important



**HUBER+SUHNER
differentiation**

- Widest portfolio of railway cables
- Highest performing cables regarding temperature, service life, weight, and dimensions
- Copper, fiber and wireless communication technology in-house



**HUBER+SUHNER
solutions**

- Energy and signal cables
- Inter-vehicle jumpers and cable systems
- Antennas for train- and trackside
- Connected mobility as complete solution

Ambition: To be the market leader and #1 preferred antenna, cable and cable systems supplier for rolling stock applications worldwide

Core market Test & Measurement



Test & Measurement

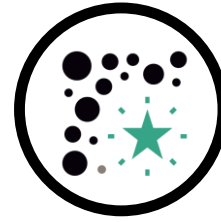
The functioning of our increasingly high-tech world relies on constant testing and measurement. Reliable performance at high speed, in high frequencies and under all conditions is what our components stand for.

Core market Test & Measurement (T&M)



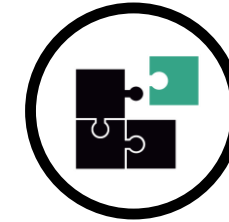
Market trends

- Automated testing
- High-speed digital testing
- Higher frequencies



**HUBER+SUHNER
differentiation**

- Best signal integrity and lowest loss
- Space-saving
- Highest mating cycles and longest working life



**HUBER+SUHNER
solutions**

- Lab and factory test leads
- Network test leads
- Connectivity within test equipment

Ambition: To be the benchmark in RF performance and the partner of choice for leading T&M customers

Core market
WAN / Access networks



WAN / Access networks

Bringing high-speed internet into every home is becoming a global commodity.

Ensuring the expandability of fiber networks at low costs and with high efficacy is what helps to make this happen.

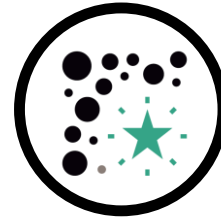
Core market

WAN / Access networks



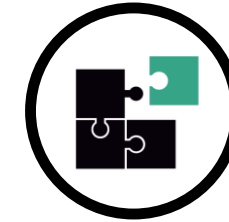
Market trends

- Fiber network growing closer to and into the homes (FTTH)
- Competition between countries/regions for best broadband infrastructure
- Emerging markets rely on low-cost solutions



**HUBER+SUHNER
differentiation**

- Modularity, density, customisation
- Ease of use
- Best TCO



**HUBER+SUHNER
solutions**

- Fiber solutions for central office
- Outside plant
- Customer premise (FITH)

Ambition: To be first choice for top 20 fixed network operators globally regarding customised fiber solutions

Core market Cell Site

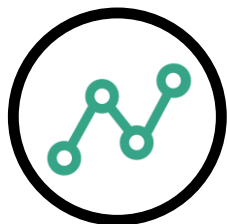


Cell Site

High volumes and increasing cost pressure demand continuous improvements in efficiency. Integrated solutions reduce installation costs and create competitive advantages for our customers.

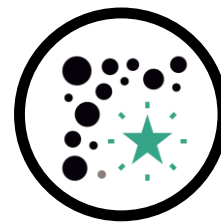
Core market

Cell Site (CS)



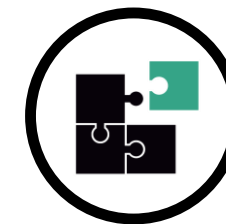
Market trends

- New spectrum, higher frequencies
- Centralised radio access network (C-RAN) and focus on service cost
- New players, i. e. tower companies, neutral hosts, infrastructure providers



HUBER+SUHNER differentiation

- One-stop-shop including kitting and supply chain flexibility
- Best TCO: easy to install products and future re-use
- Global presence and network of low cost manufacturing sites



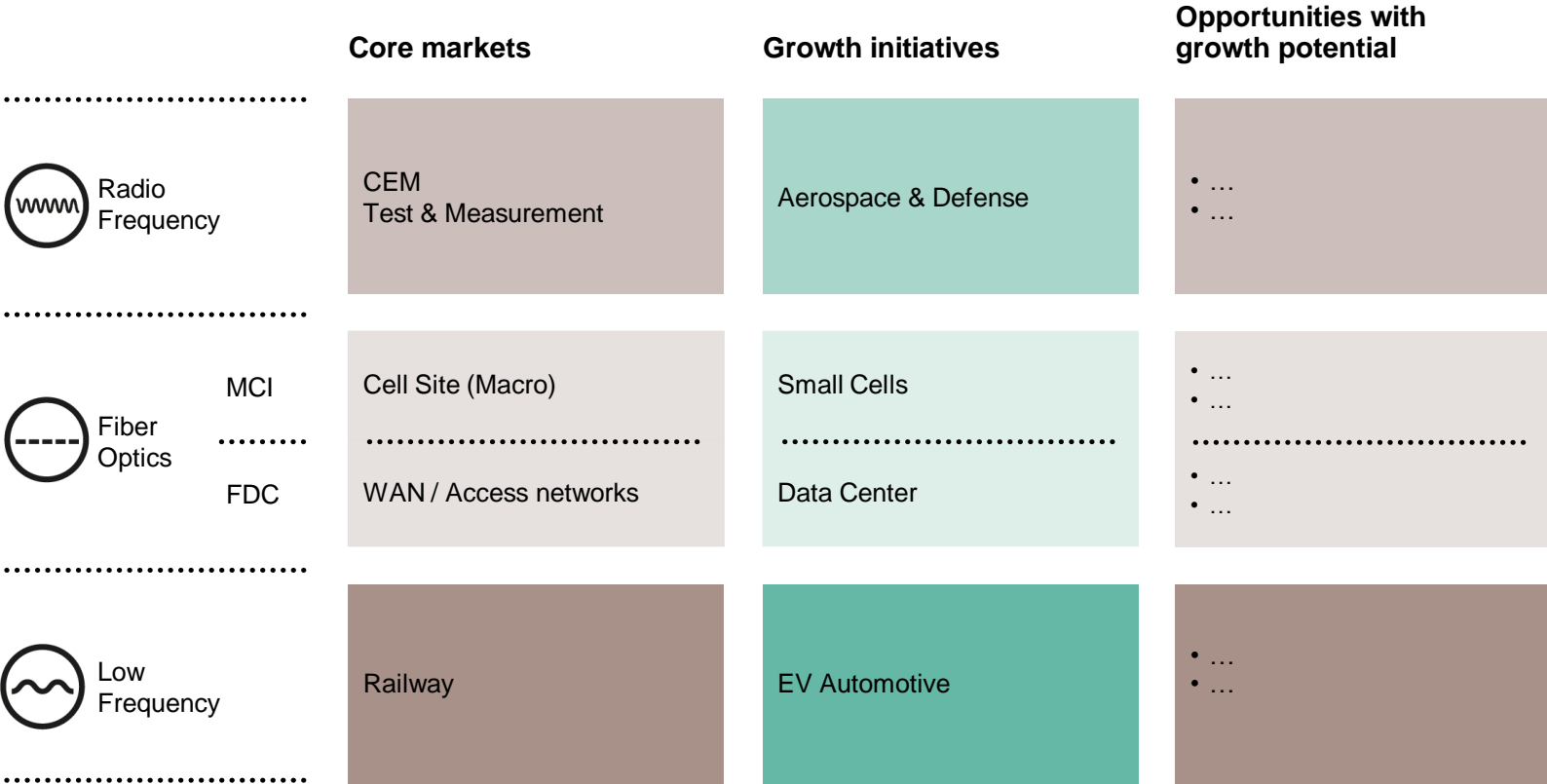
HUBER+SUHNER solutions

- Complete connectivity for macro and small cells, DAS, front- and backhauling
- Solutions for transport networks including WDM solutions and fiber management in C-RAN
- Monitoring and protection switching

Ambition: To deliver mobile network infrastructure that is ready to support evolution to 5G and to maintain a leading position in the Cell Site market

Growth initiatives

Growth initiatives have been identified based on their potential for future profitable growth and their strategic fit. In order to succeed we ensure a dedicated approach, pre-investments in resources and the formation of highly committed teams. Our today's growth initiatives should become core markets of the future.



Growth initiative
Electric Vehicles



Electric Vehicles

Cutting emissions and making our mobility more sustainable is driving the worldwide need for space-saving and safe, weight-saving connectivity systems in electric vehicles.

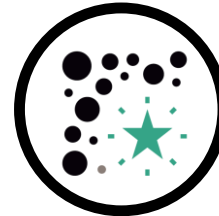
Growth initiative

Electric Vehicles



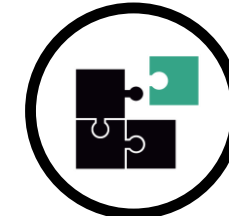
Market trends

- Trend to e-mobility irreversible
- All major OEMs now have an EV strategy
- China is pushing EV market with ambitious timelines



HUBER+SUHNER differentiation

- Space- and weight-saving design
- Temperature stability
- Complete high voltage solutions



HUBER+SUHNER solutions

- RADOX® screened power cables up to 1000V
- High voltage connectivity systems (EV-C)
- High voltage distribution units (HVDU)

Ambition: To become a significant supplier for high voltage cabling for electric automotive vehicles and grow business to a new core pillar

Growth initiative Aerospace & Defense



Aerospace & Defense

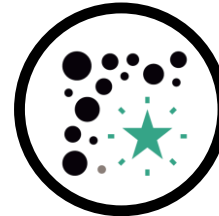
Ensuring uncompromised reliability under extreme conditions while at the same time reducing size, costs and weight calls for highly robust connectivity solutions in aerospace and defense.

Growth initiative Aerospace & Defense



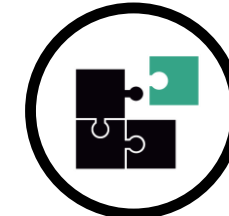
Market trends

- High, increasing defense budgets
- Internet access via satellites (New Space)
- Unmanned vehicles



**HUBER+SUHNER
differentiation**

- Highest reliability
- Electrical and mechanical performance
- RF system competence and RF-over-fiber



**HUBER+SUHNER
solutions**

- RF connectors and cables
- Cable assemblies
- Complete RF solutions

Ambition: To double business, defend leading RF technology position and grow with RF system solutions

Growth initiative Data Center

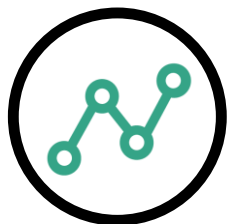


Data Center

Simplicity is the key to developing compact, easy-to-install and expandable data center solutions in an ever-growing market.

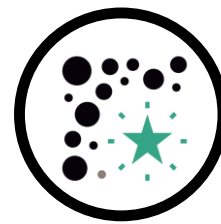
Growth initiative

Data Center



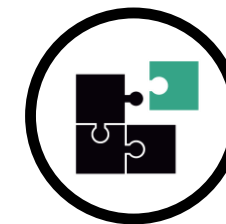
Market trends

- Doubling of data traffic / 3 years
- Co-location and cloud market rapidly growing
- Data center = critical infrastructure



**HUBER+SUHNER
differentiation**

- Packing density and ease of installation
- Reliability in operation
- Flexibility and modularity



**HUBER+SUHNER
solutions**

- Fiber cabling
- Fiber management systems
- Optical switching

Ambition: To grow the business to a new core pillar

Growth initiative Small Cells



Small Cells

Installing with high speed is crucial for the success of small cell antennas in dense or temporary environments.

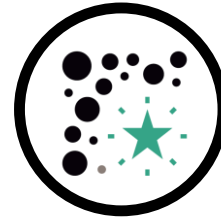
Growth initiative

Small Cells



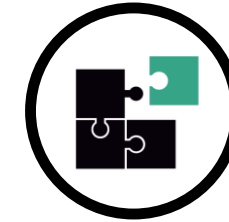
Market trends

- Network consolidation
- Coverage inside buildings
- New players



**HUBER+SUHNER
differentiation**

- Fast installation
- Small form factor
- One-stop-service und kitting



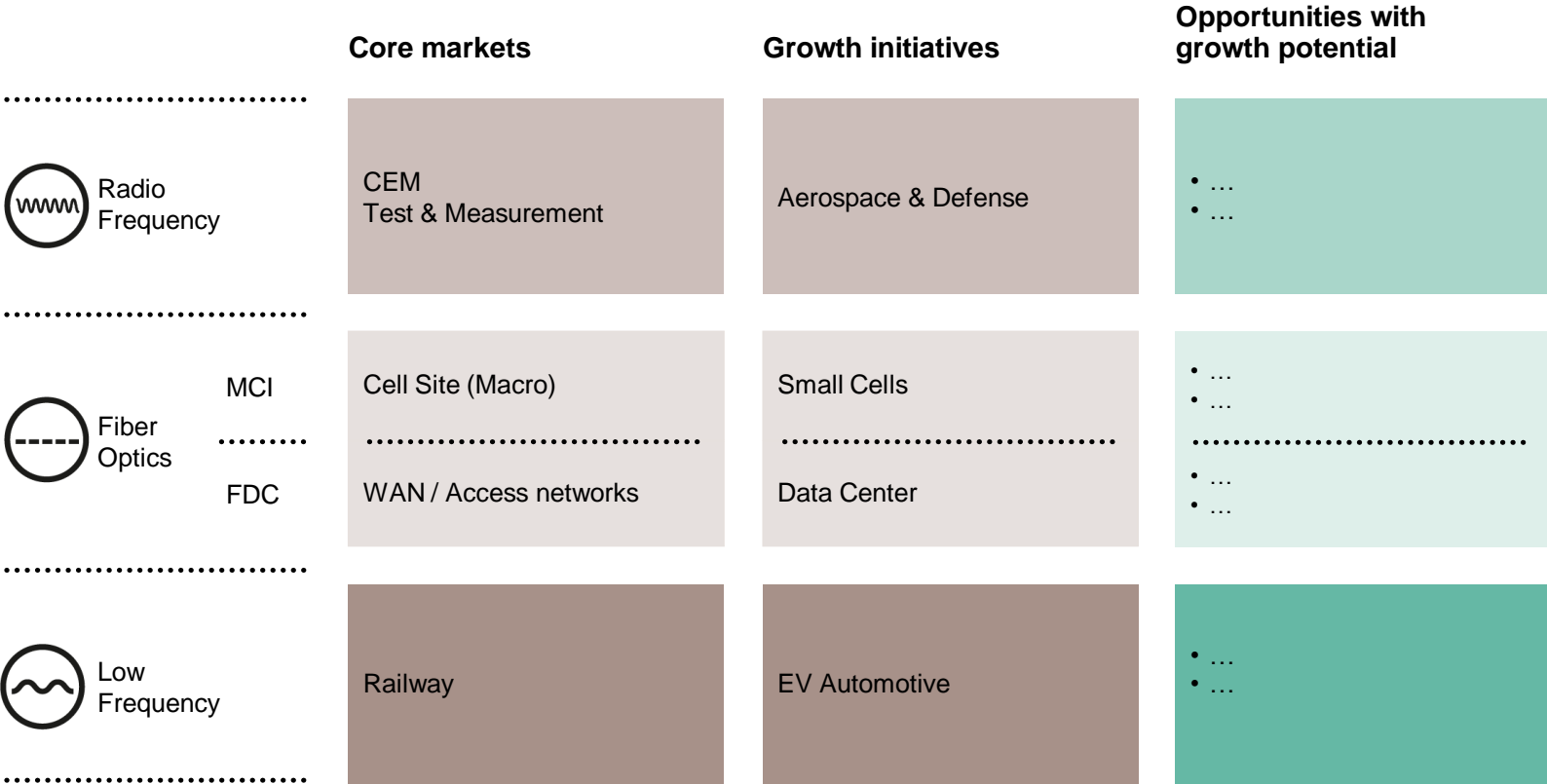
**HUBER+SUHNER
solutions**

- FO, RF, LF connectivity solutions
- Antennas
- Passive and active WDM solutions

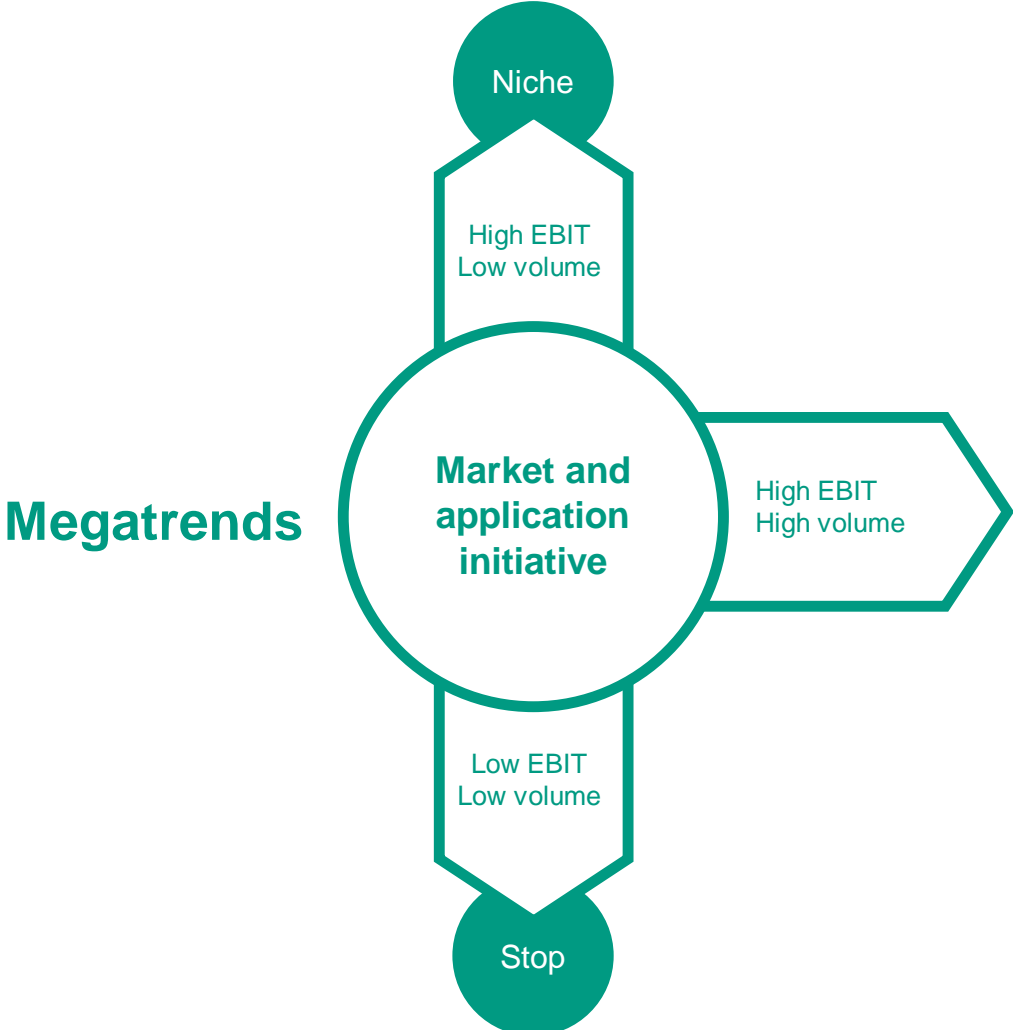
Ambition: Growth in small cells to at least compensate for the decline in the macro cell market

Opportunities with growth potential

Opportunities with growth potential are attractive business ideas at an early stage. They prove either to have the prospect to become a growth initiative or an interesting niche business – or they are not pursued. We therefore strive to always have a range of «beyond bold moves» in the pipeline.



Our way forward



Opportunities with growth potential	Growth initiatives	Core markets	
• ... •  Radio Frequency
• ... •  Fiber Optics
• ... •  Low Frequency

Ambition

Hold a strong position in target markets

We provide reliable quality products and services which generate the highest added value for our customers. Our profound knowledge of customer needs and our unique combination of technologies ensure our strong market position.

- Reliable products and services
- High-quality, broad product range
- Consistently high quality
- Fast and reliable global service

- Strong market position
- High market share in target markets
- Established brands
- Focus on growth markets

- Added value for our customers
- Continuous innovation
- Profound knowledge of applications and customer needs
- Unique combination of technologies
- Components and systems

Be a leader in technology and innovation

Innovation in our company targets three different fields to ensure the high degree of differentiation of our connectivity solutions: improvement of existing products in terms of costs, development of new product generations and applications, and the exploring of new technologies and new business fields.

Product care

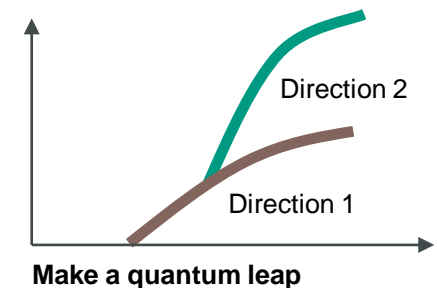
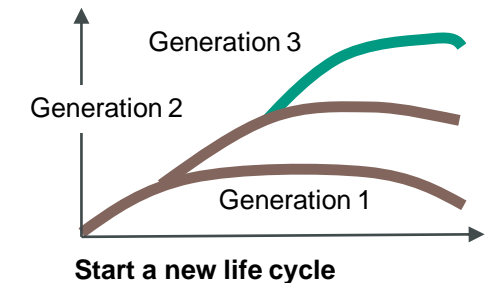
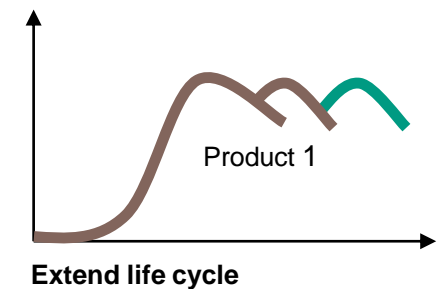
- Improve functionality
- Reduce costs
- Range adjustments

New products

- New generation of products
- New applications
- Additional functionalities

New technologies / new business fields

- Development of new technologies
- Entry into entirely new business fields



Operational excellence

The basis of operational excellence is our outstanding manufacturing expertise. Our differentiated and flexible supply chain meets individual customer needs in terms of delivery times, reliability, and service. Strict lean management and all-embracing quality management result in competitive costs and high-quality products. By running a global production network we are close to our customers.

- Global production network
- Technology centres and local assembly plants with high manufacturing expertise and customer proximity
- Global sourcing network to ensure best production supplies

- Differentiated and customer oriented supply chain
- Flexibility, short delivery times and reliability thanks to close, tailor-made customer care
- For each customer the right supply chain management with fast delivery times and individual value-added services

- Competitive costs and high quality
- Lean management: cost-optimised, fast and stable processes
- Quality and environmental protection through global process and quality management



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Connecting – today and beyond