

WELCOME TO THE FIRST INVESTOR DAY AT BURCKHARDT COMPRESSION

Marcel Pawlicek, CEO

CHAIRMAN'S NOTE

Valentin Vogt, Chairman

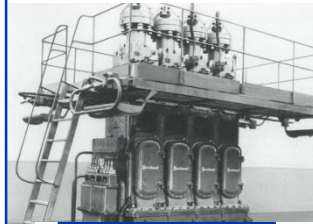
Burckhardt Compression and the History of Gas Compression



Engineering Works Burckhardt established in Basel

1844

1883



Production of plastics

1951



Liquefaction and transport of natural gas

1971

2002

2007



Minority stake in Arkos Field Services

2015

1878

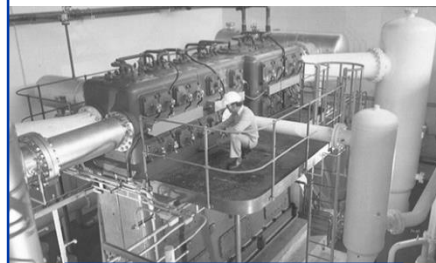
1920



Beginning of production of fertilizers

1935

1969



Safe compression of oxygen in the steel industry

1982

2006

2013



Use of LNG as fuel for maritime carriers

2016



Majority stake in Shenyang Yuanda

Recent History of Burckhardt Compression

	1996 - 1999	2000 - 2001	2002 - 2005	2006 - 2015
Ownership	Division of large corporation		Private equity owner	Stock listed
Market environment	Stable	Stable	Favorable	Very favorable
Growth	No growth	Shrinking	Strong growth	<ul style="list-style-type: none"> • SYST: cyclical • SERV: continuous growth
Profitability	Cyclical on lower level	Loss making due to internal issues	Steadily increasing	Substantially above industry average
Success factors	Technology	<ul style="list-style-type: none"> • Zero base budgeting • One location • New organizational structure • Cost discipline 		<ul style="list-style-type: none"> • International Footprint • New leadership tools

WAY FORWARD, BC STRATEGY

Marcel Pawlicek, CEO

Our Vision



We are committed to becoming the first choice manufacturer of reciprocating compressors. Throughout a worldwide network we provide all products and services required during a reciprocating compressor's life cycle.

Leader for Any Gas Compression Challenges in All Segments for Systems and Services

Raw materials



Gas



Oil



Coal



Air

End products utilization

- Power generation
- Fuel (NGV / CNG)
- Heating / cooking
-
- Gasoline
- Diesel
- Kerosene
- Fuel oils
- Heating oils
- Lubricating oils
- Asphalt and tar
-
- Food packaging
- Industrial foils
- Plastic bags
- Insulation material
- Automotive parts
- Eva foils for solar panels
-
- Cosmetics
- Pharmaceuticals
- Fertilizers
- Detergents
-
- Industrial gas distributors
- Food processing
- Steel production
- Glass production
- Microchip production
- Photovoltaic production
-

Global Changes Ahead

- **+35% Food**
- **+40% Water**
- **+50% Energy**



Megatrends

- **Urbanization and increase of population**
- **Shift in economic power**
- **Climate change and resource scarcity**
- **Digitalization**

Source: National Intelligence Council and PWC megatrends

Megatrend Urbanization and Increase of Population



- Every week +1.5 mn people added to global urban population
 - 90% of this growth will take place in emerging countries
 - Huge demand on infrastructure, energy, services, job creation, climate and environment
 - Today, IT uses 10% of our daily consumed electricity
- ⇒ more need on power, fuel, natural gas and petrol for heating and cooking, fuel for transportation, asphalt and tar, insulation material, steel production

Megatrend Shift in Economic Power



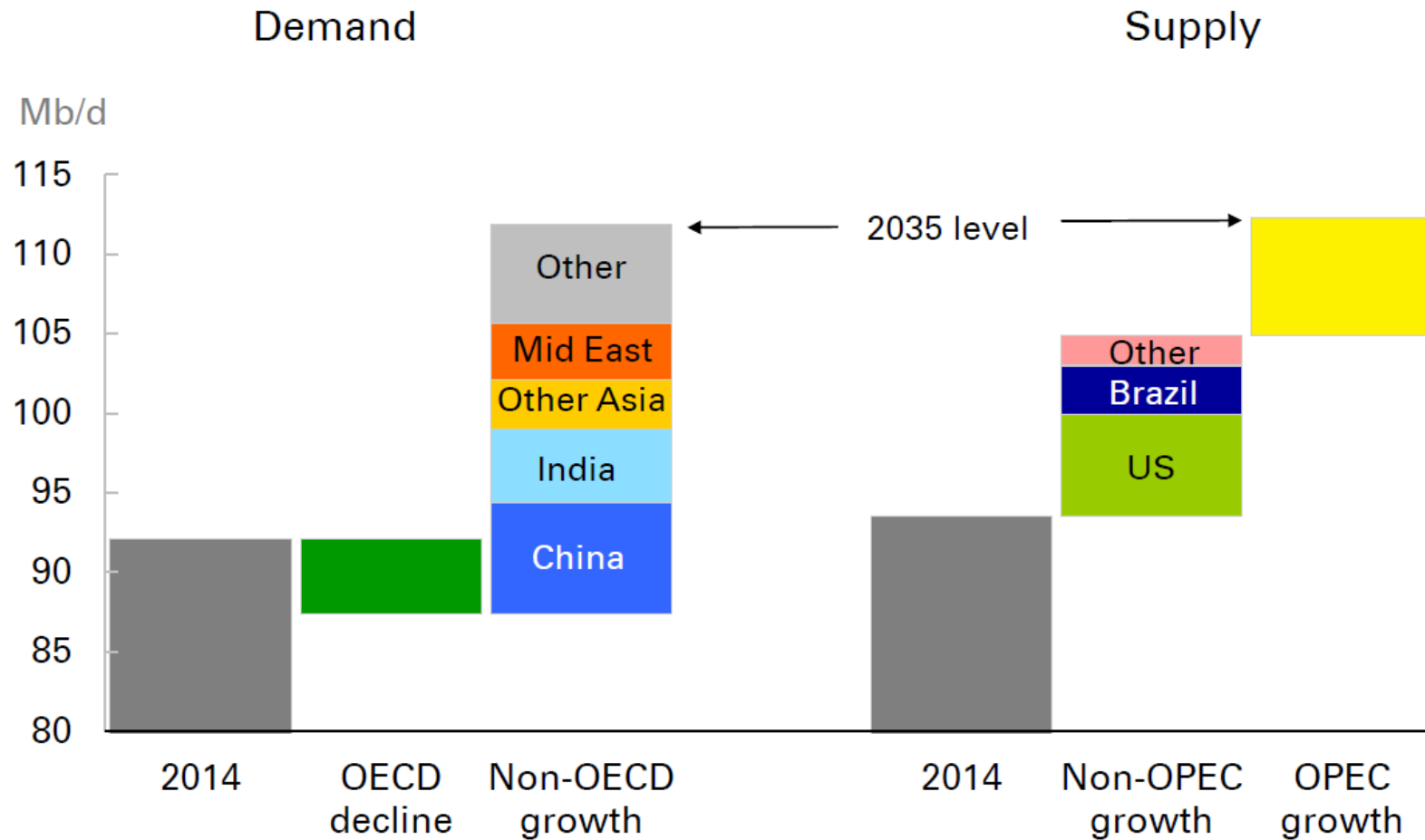
- **China: Shift from import economy to domestic production and consumption and export economy**
 - See «One belt, one road» movement
 - **India: Steady but slower growth**
-
- ⇒ **BC with local production in China and India, as well as assembly sites in South Korea and the US**
 - ⇒ **Sales offices in about 40 countries, i.e. Brazil, Columbia, South Africa etc.**

Megatrend Climate Change and Resource Scarcity



- Resource scarcities
 - Current models of production processes and consumption will change
 - Energy demand for recycling
 - Waste water and sea water treatment
 - Gas instead of oil where possible
 - 25% less CO₂ emission when burned
 - Less NO_x and SO_x
 - Future importance of CO₂ capturing and storage (Paris agreement)
- ⇒ More need on fertilizers, photovoltaic, food packaging, glass production

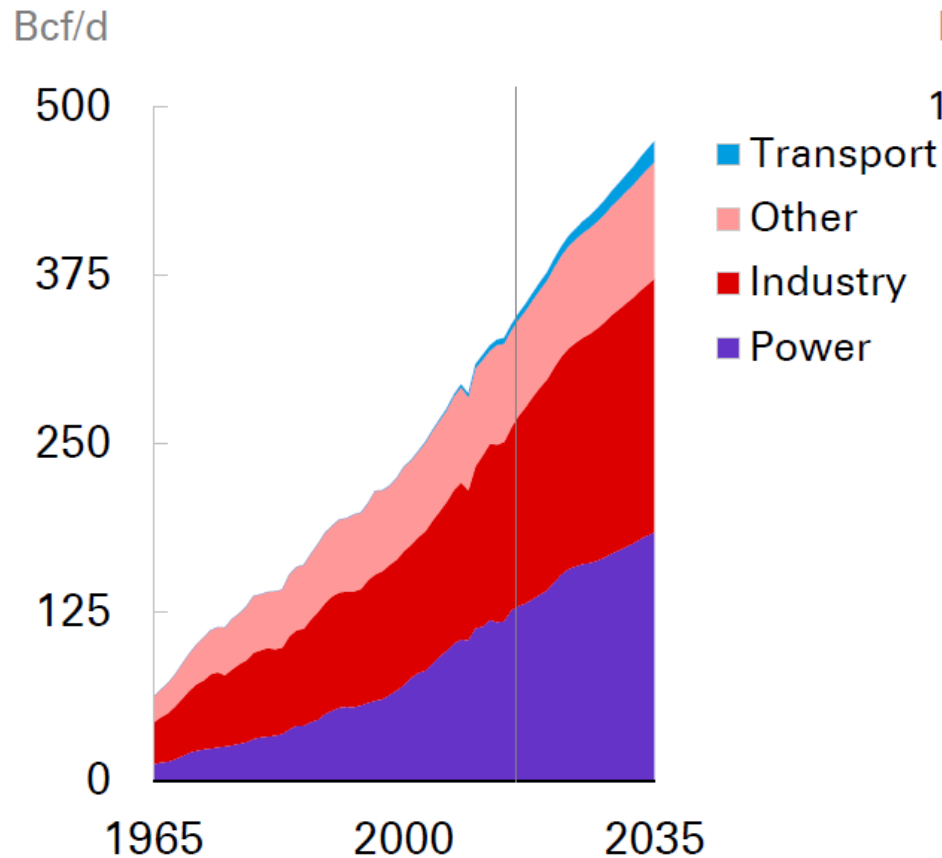
Strong Growth in Asia Drives Increases in Oil Demand



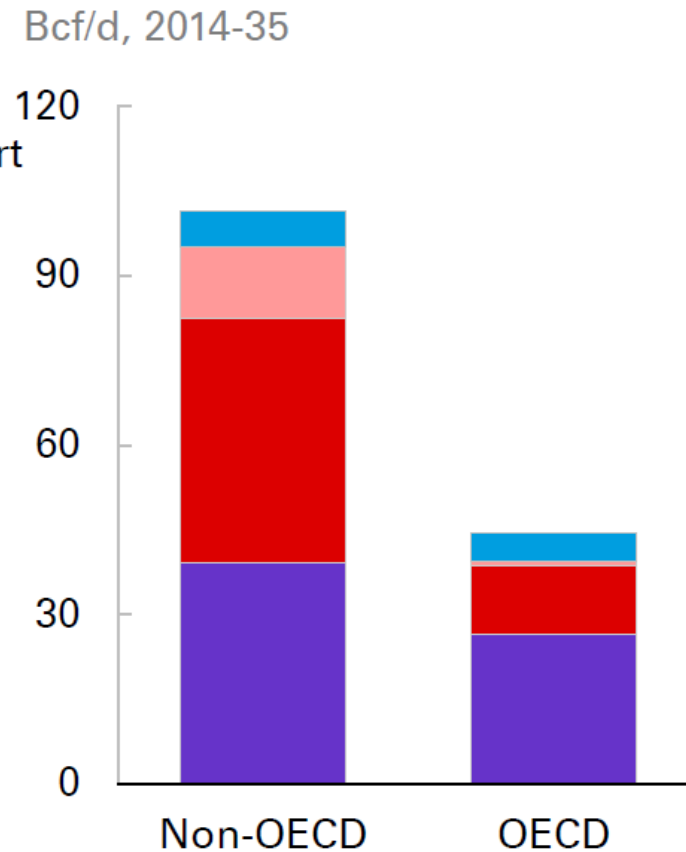
Source: BP Energy Outlook 2016

Demand for Natural Gas Grows Strongly

Demand by sector



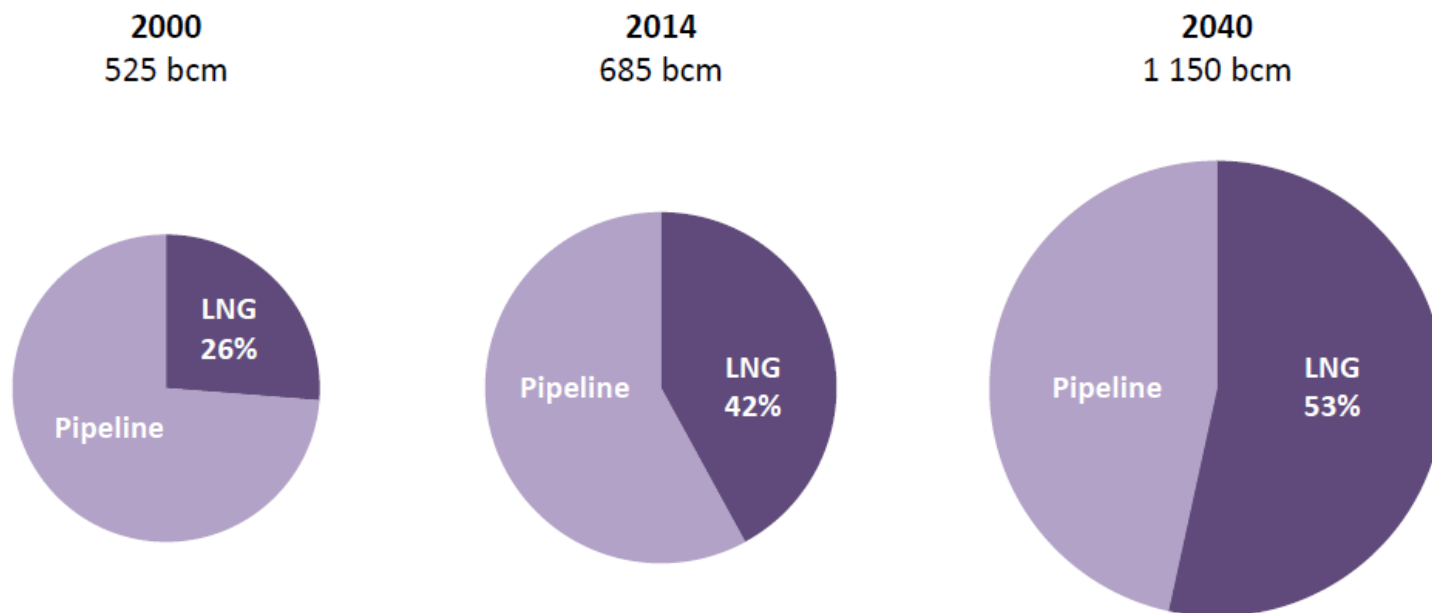
Demand growth by region



World Energy Outlook 2016 ©OECD / IEA

Share of LNG in Global Long-Distance Gas Trade

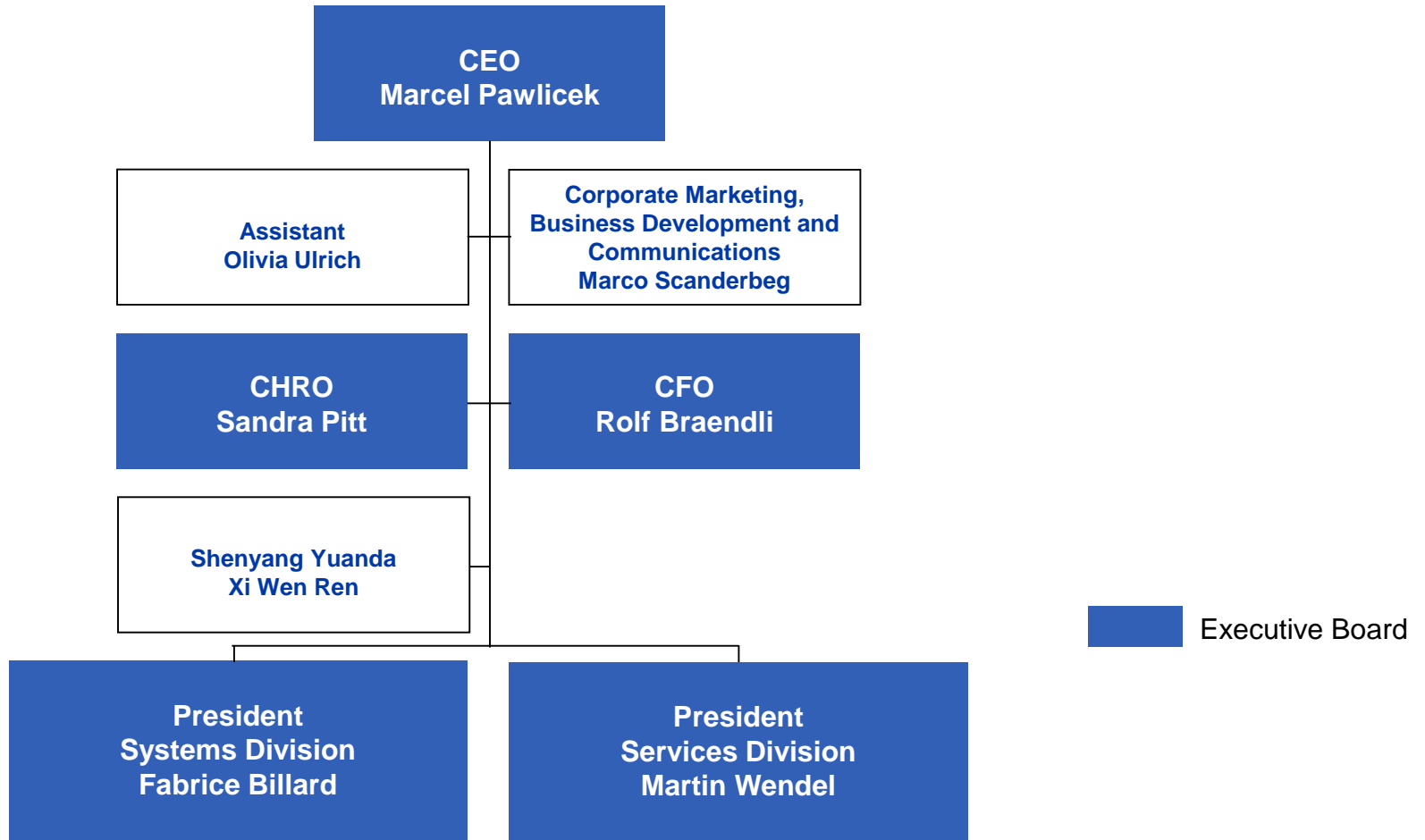
Share of LNG in global long-distance gas trade



Contractual terms and pricing arrangements are all being tested as new LNG from Australia, the US & others collides into an already well-supplied market

World Energy Outlook 2016 ©OECD / IEA

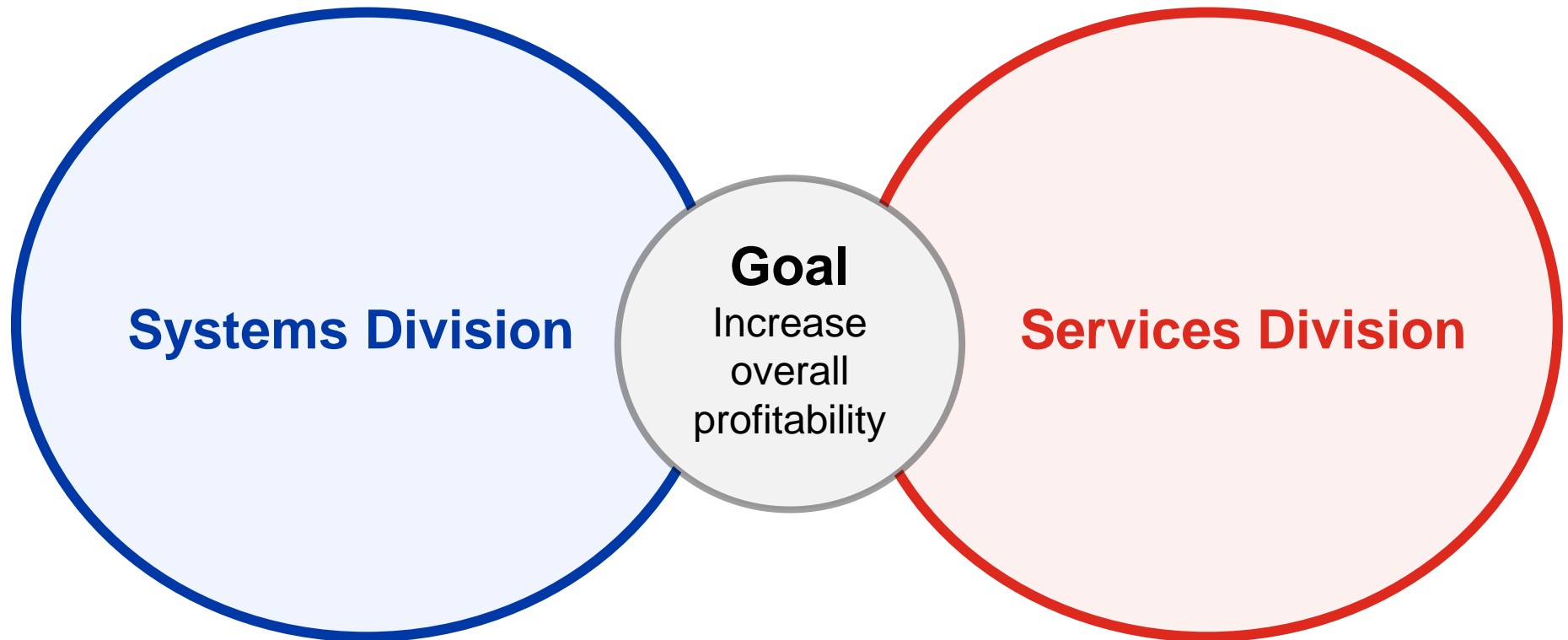
The Organization for the Future



Customer Requirements

	Systems Division	Services Division
Response times	Weeks up to months	Hours and days
Delivery times	Months up to years	Days and weeks
Order types	<ul style="list-style-type: none"> Engineered projects with intense project management Average order size ~ CHF 2-3 mn <ul style="list-style-type: none"> 40% compressor 60% accessories 	<ul style="list-style-type: none"> Majority of business depends on smaller orders → CHF 5'000 to 10'000 Large engineering / revamp orders possible
Decision makers	<ul style="list-style-type: none"> End users Engineering Procurement Contractors (EPCs) 	<ul style="list-style-type: none"> Operators, Maintenance people Purchasing → depends on order volume Management for large service agreements
Crucial factors	<ul style="list-style-type: none"> Sales and project activities are handled globally 	<ul style="list-style-type: none"> Technical expertise Sales and project activities are very local

Way Forward



Global Well Positioned to Reach our Vision and Goals

■ Burckhardt Compression
Manufacturing / Assembly
Locations

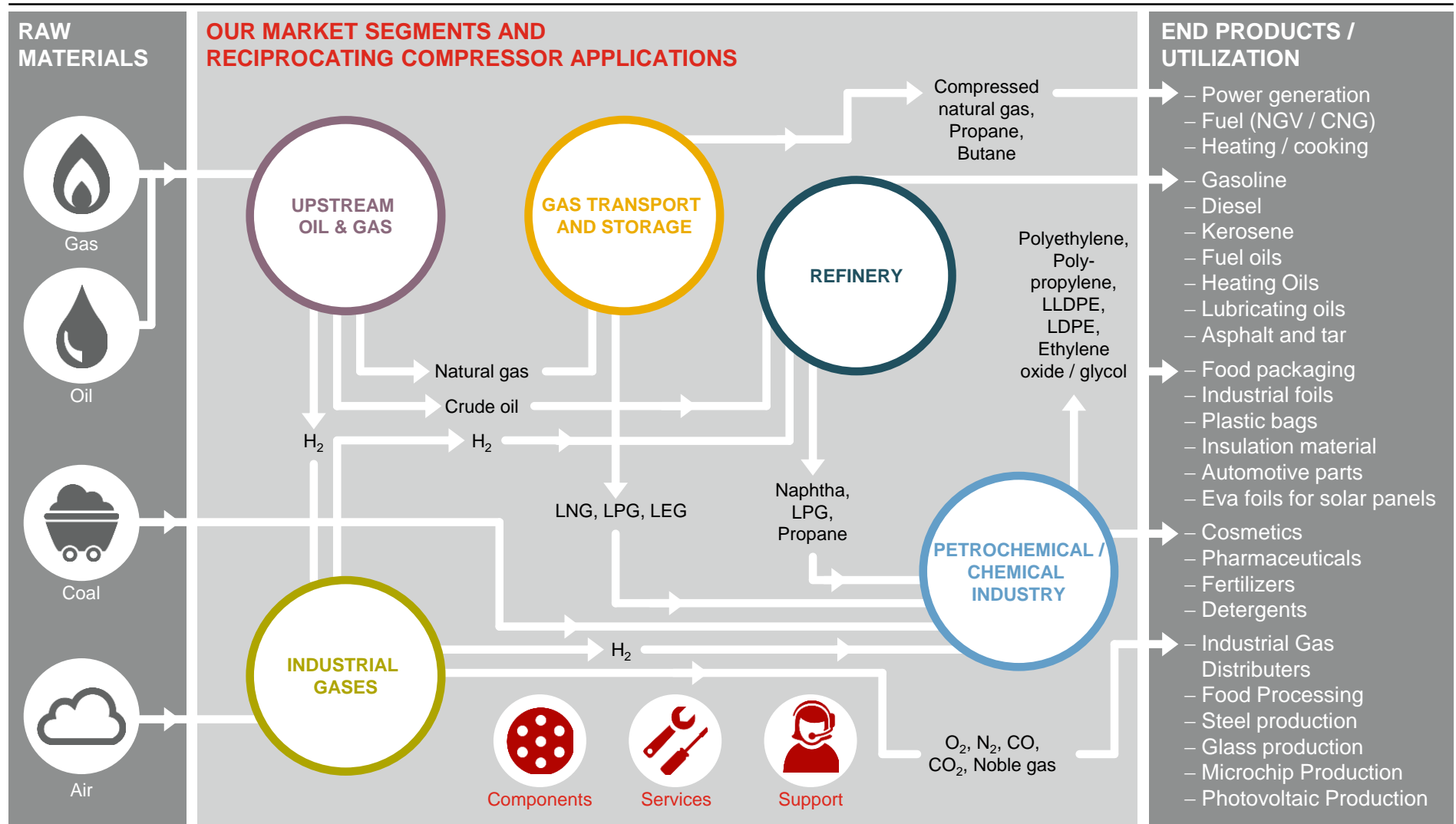
■ Burckhardt Compression
Subsidiaries and Service
Centers



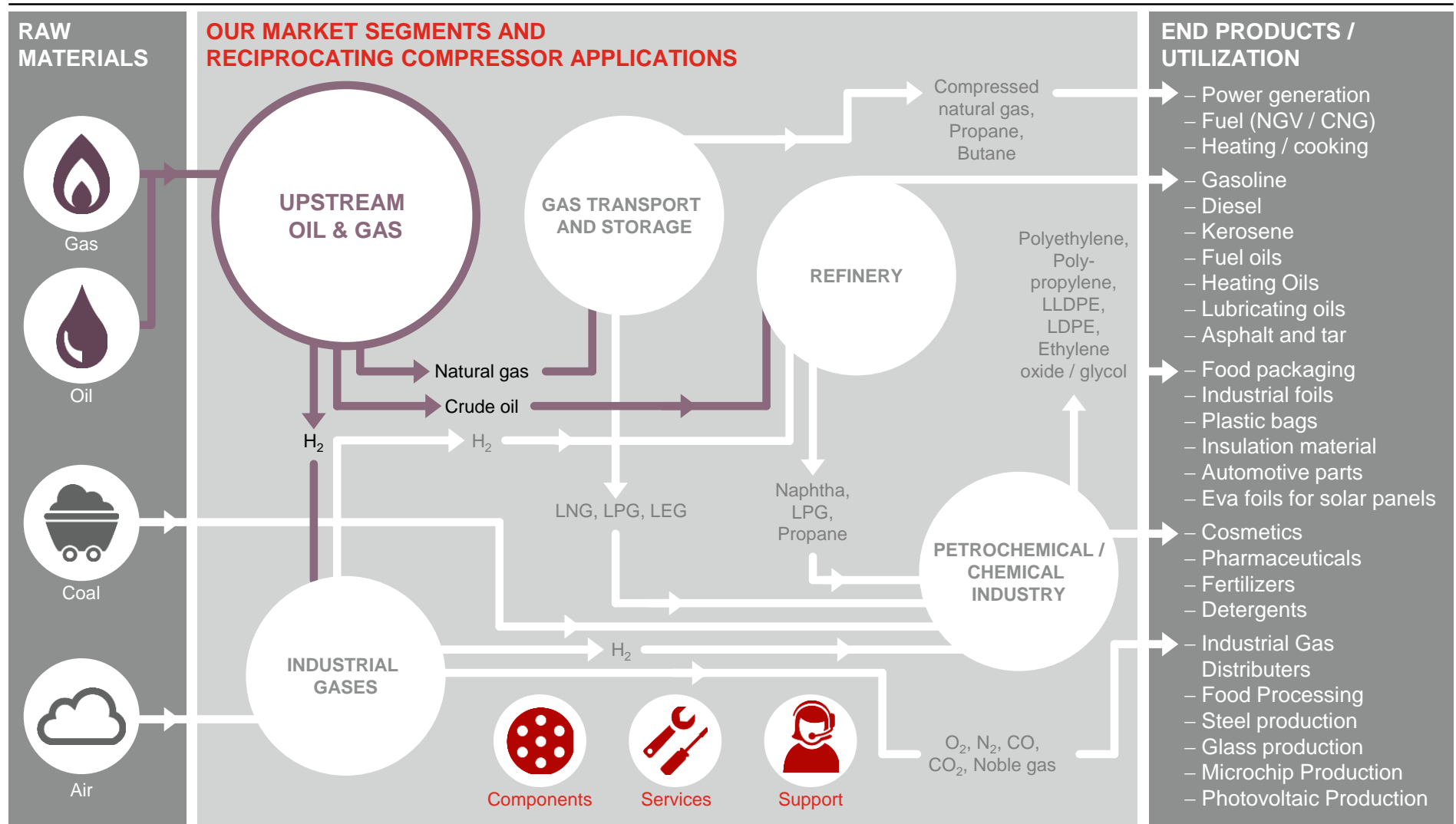
MARKETS

Marco Scanderbeg, Vice President Corporate Marketing, Communications & Business Development

Markets – From Basic Materials to Various End Products



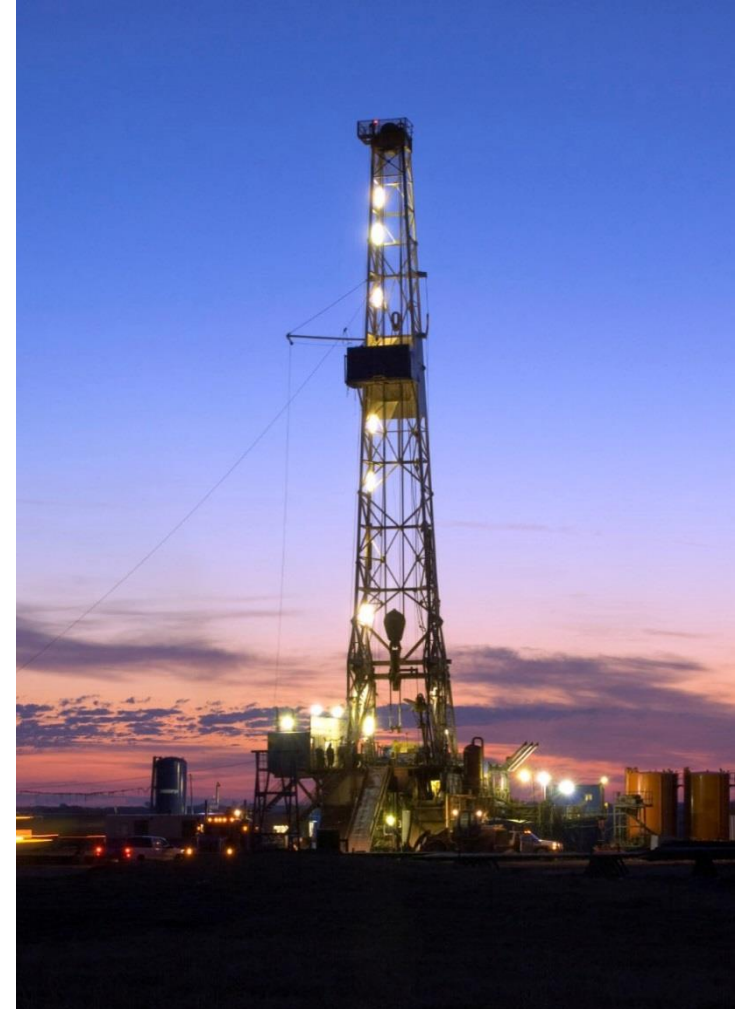
Markets – Upstream Oil & Gas



Upstream Oil & Gas – Main Applications

Onshore and offshore applications:

- **Enhanced Oil Recovery (EOR)**
 - Gas re-injection
 - Gas & oil lift
 - Acid gas injection (H_2S , CO_2)
- **Gas gathering**
- **Gas processing / treatment**
- **LNG FPSO**



Upstream Oil & Gas

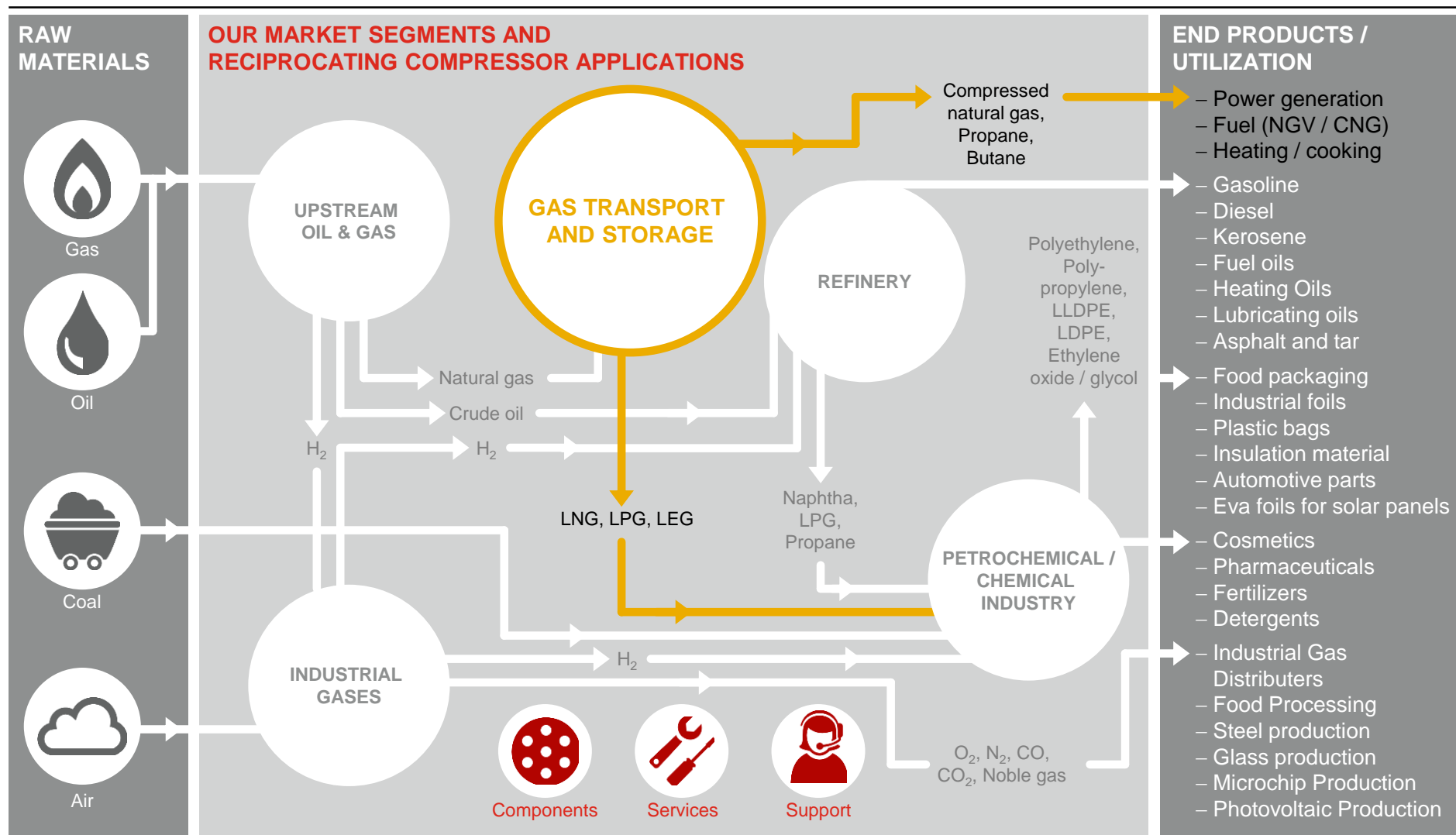
Market drivers

- Future crude oil and natural gas price development
 - Keep flexibility with offshore applications
 - Shale gas activities
 - Aging oil fields with declining production
 - Drilling of oil and gas is getting more demanding
-

Expected market development

- Once the oil price picks up significantly
 - Further development of the onshore as well as offshore business
 - Development of not easy reachable oil and gas fields
 - Growing enhanced oil recovery

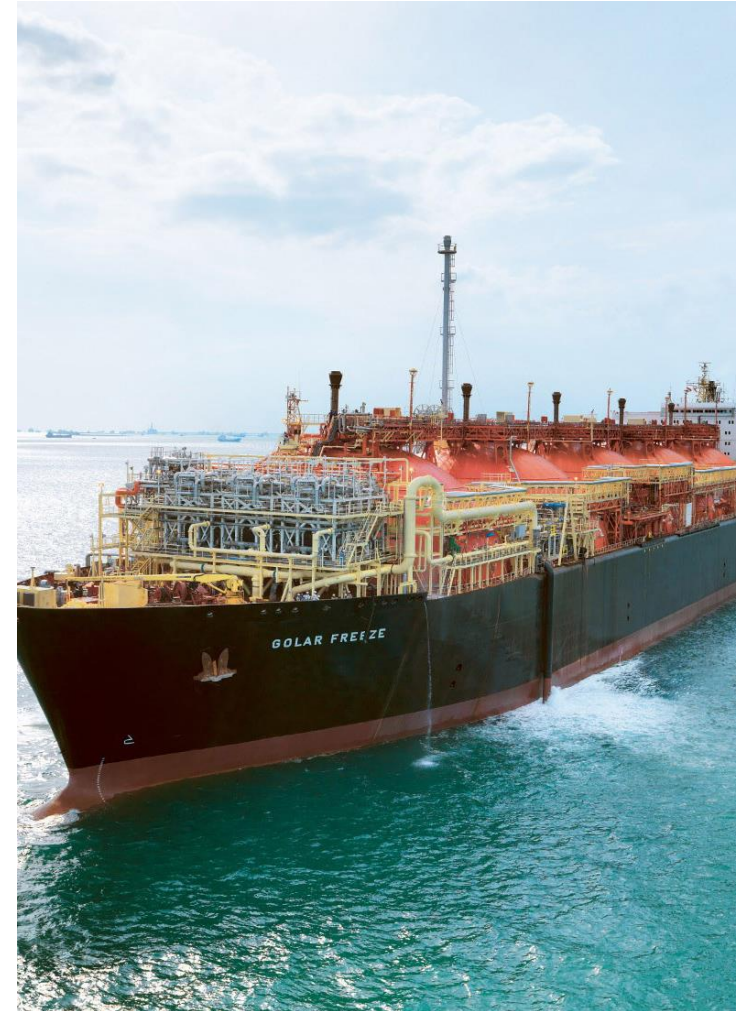
Markets – Gas Transport & Storage



Gas Transport and Storage – Main Applications

Onshore and offshore applications:

- Boil-off gas handling (BOG)
- Liquefied Natural Gas (LNG)
- Liquefied Petroleum Gas (LPG)
- Pipeline feed applications
- Underground gas storage
- Fuel gas injection for ME-GI dual fuel propulsion system (DFDM)
- Floating storage and regasification unit (FSRU)
- Floating production, storage and offloading (LNG FPSO)



Gas Transport and Storage

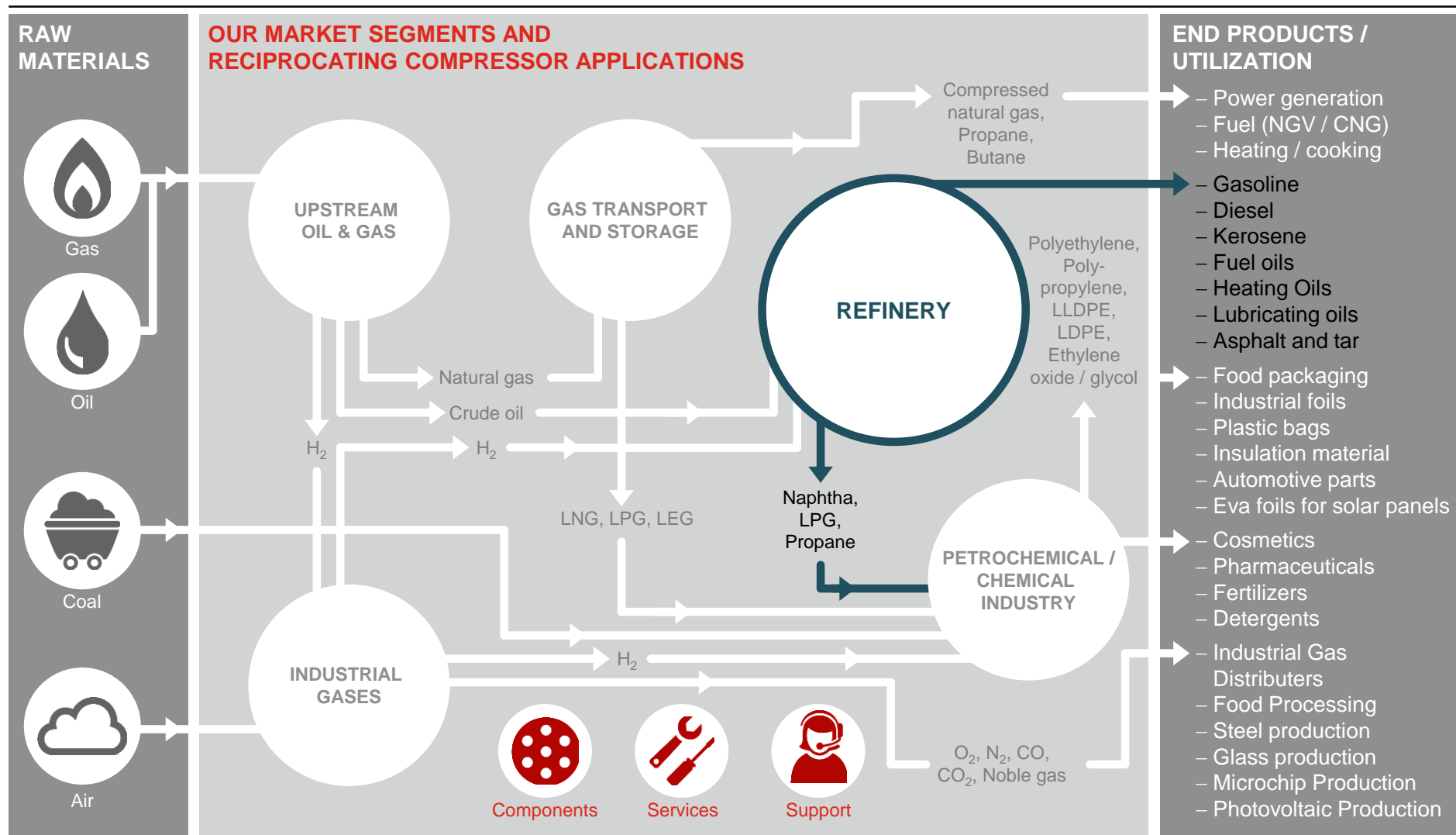
Market drivers

- Long-term increasing demand for gas as a substitute for oil and coal
 - Importance of natural gas as a clean and inexpensive source of energy
 - Gas is found in areas where it is not used
 - Move from onshore to offshore activities (FSRU)
-

Expected market development

- Market consolidation in LNGM and reduced order potential in 2016 / 2017
- Positive development for LNG receiving terminals
- LPG marine business on a low level (down cycle)

Markets – Refinery



Refinery – Main Applications

- **Hydrogen and hydrogen mix gases for various process steps**
 - **Hydrotreating**
 - **Hydrocracking**
 - **Reforming**
 - **Isomerisation**
 - **Desulphurisation**
 - **Dearomatisation**
 - **Hydroalkylation**



Impression of a Modern Refinery Under Construction – Jamnagar Complex, India (1.2 mn barrels / day)



© Bechtel

Refinery in Collombey, Switzerland – Small Capacity & Not Cost Effective → Decommissioned



How does such a complex process plant work?
Where are reciprocating compressor solutions needed?

How Does a Typical Refinery Work?

Processes in a Refinery

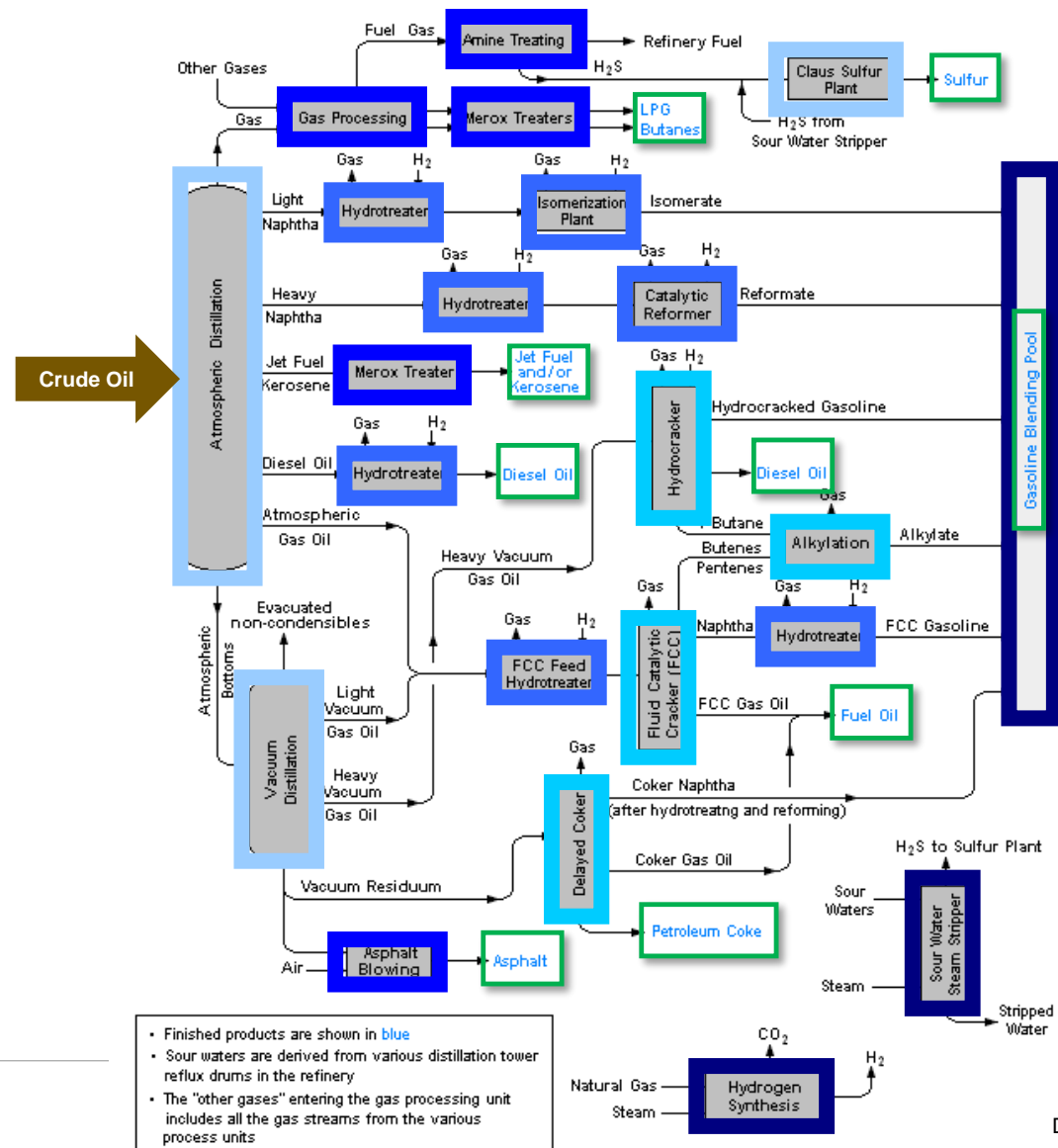
Separation
Physically

Conversion
Chemically

Increase Quality
Forming of aromatics

Cleaning
Physically, chemically

Support
(Waste-)Water, Catalysts, H_2 ,...



Refinery

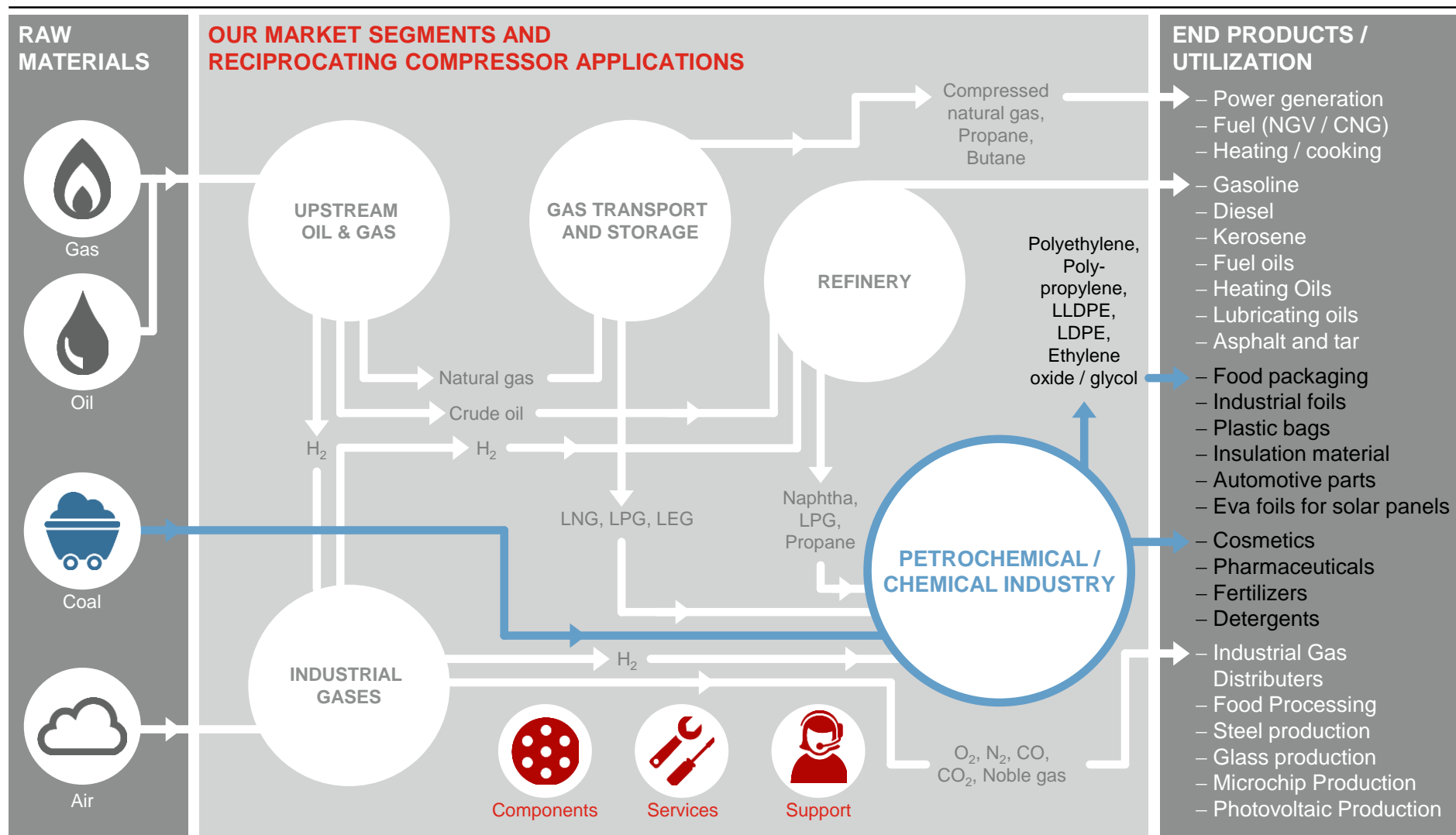
Market drivers

- Growing demand for clean fuels due to environmental regulations
 - Flexibility to process different crude oil qualities
 - Modernization of old infrastructure
 - Strategic importance of refining capacity for independent supply
 - Oil producing countries capturing a greater share of value creation across the process chain
-

Expected market development

- Continuation of current high market level worldwide
- Growing demand for refined products in Emerging Countries
- Investments to process different crude oil qualities

Markets – Petrochemical / Chemical Industry



Petrochemical / Chemical Industry – Main Applications

- Polyethylene / Polypropylene
- Low density polyethylene (LDPE)
- Linear low density polyethylene (LLDPE)
- High density polyethylene (HDPE)
- Ethylene oxide (EO)
- Ethylene glycol (EG)
- Rubber
- Aromatics / BTX, Alcohols, Ammonia, Urea
- Wet oxidation



Petrochemical / Chemical Industry

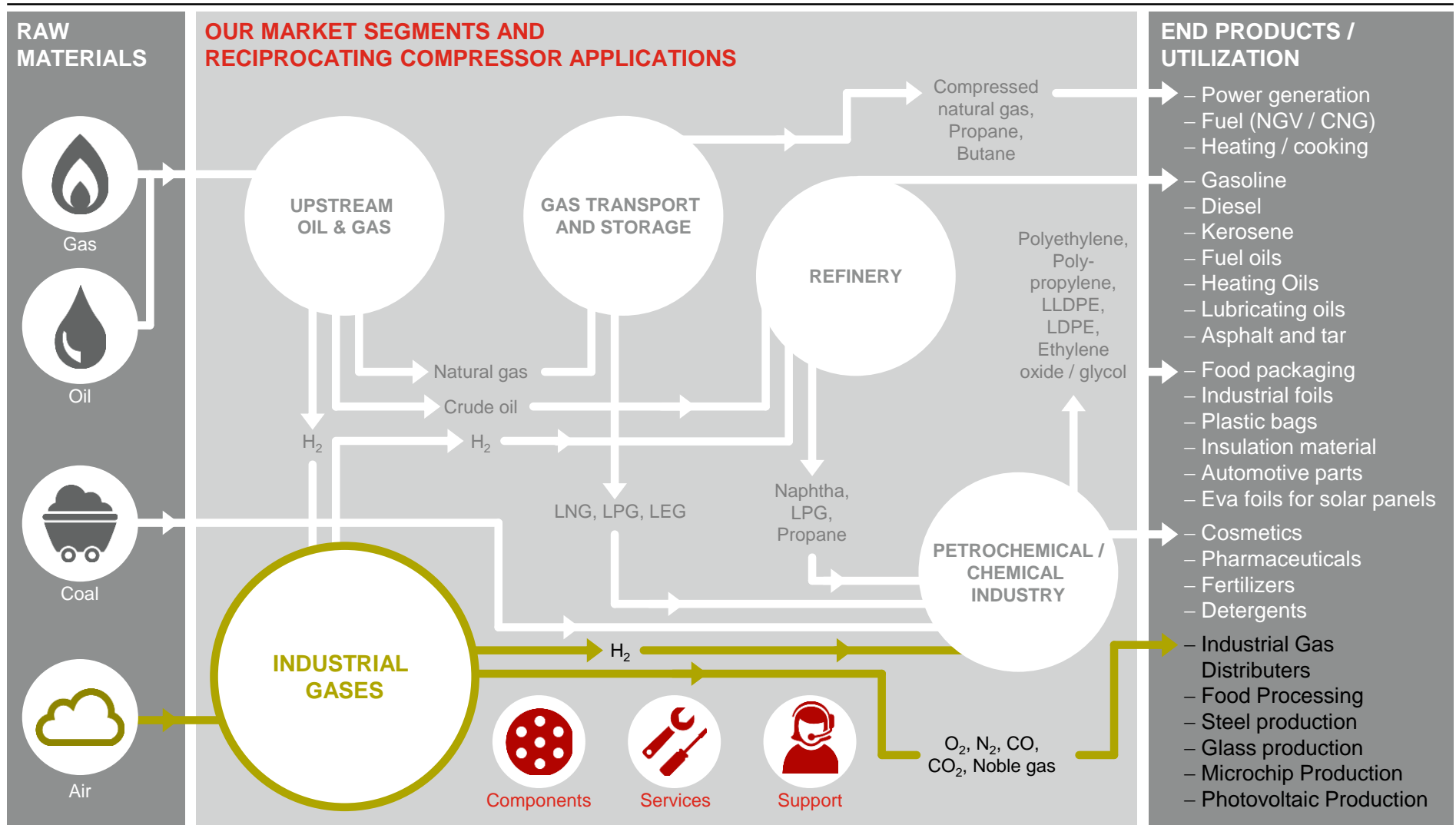
Market drivers

- GDP growth for polyolefin products in emerging countries
- Shift of production to countries with low feed stock price
- Shift from commodity to specialty products

Expected market development

- New LDPE projects (high pressure) under discussion
- Continuous growing polyolefin demand in Emerging Countries
- Stable opportunity pipeline

Markets – Industrial Gases



Industrial Gases – Main Applications / Gases Handeled

- **Hydrogen generation**
- **Air separation**
- **Gas bottle filling**
- **Oxygen**
- **Nitrogen**
- **Carbon monoxide**
- **Carbon dioxide**
- **High pressure CO₂**
- **Chlorine**
- **Gases for polysilicon production**
- **Bone-dry gases**



Industrial Gases




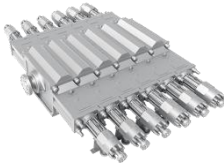


Market drivers

- Growing population and industrialization in emerging countries
 - Sustainable demand for industrial gases in food, tobacco, paper, chemical, agriculture, mining, construction and health care industry
 - De-carbonization initiatives replacing hydrocarbons by hydrogen
-

Expected market development

- Increasing market activities in all areas
- Further potential for O₂, H₂, CO, CO₂ and high pressure O₂ and Air
- Further potential for hydrogen in mobility applications

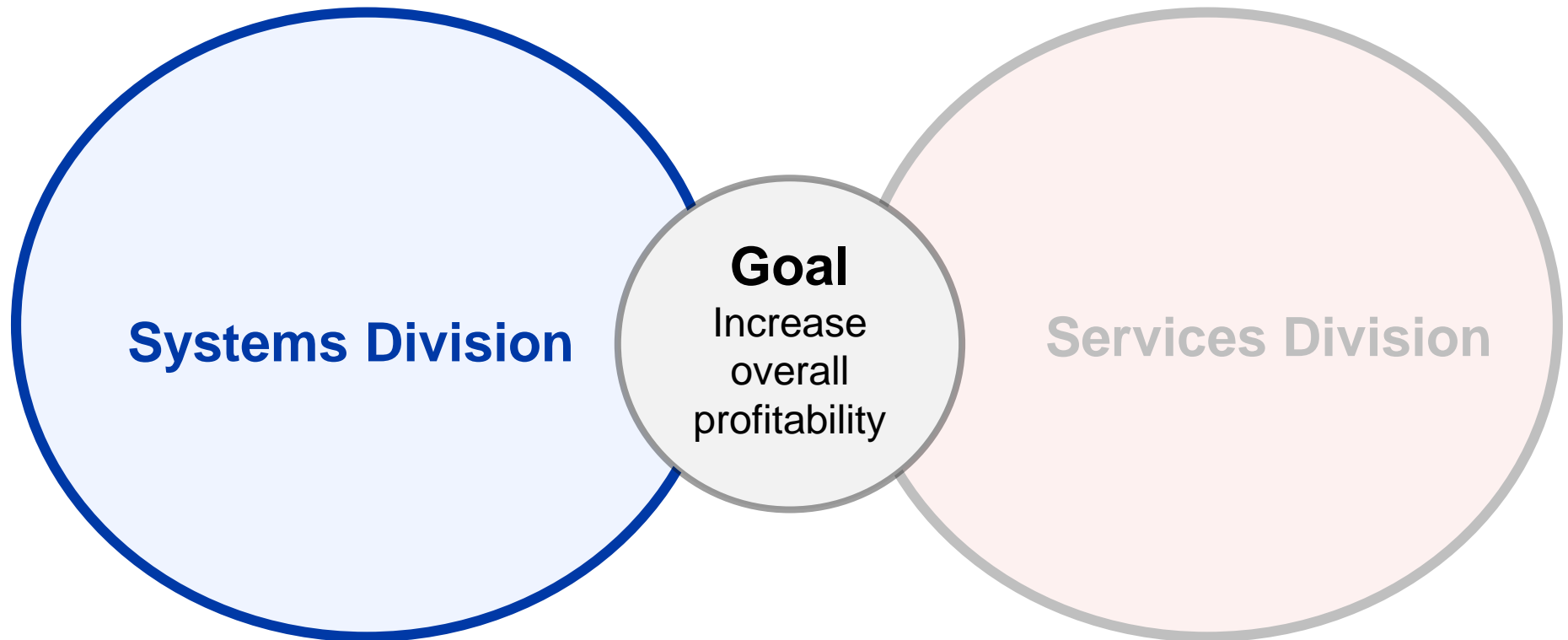
Product and Market Strategy – Creating Value in the Various Applications of Each Market Segment

<div>Products</div> <div>Market</div>	 Laby® Compressors	 Laby®-GI Compressors	 Process Gas Compressor API 618	 Hyper Compressors	 Standard High Pressure Compressors	 Components and Service
Upstream oil & gas	●	●	●		●	●
Gas transport and storage	●	●	●		●	●
Refinery			●			●
Petrochemical / Chemical industry	●		●	●		●
Industrial gases	●		●		●	●

SYSTEMS DIVISION (SYST)



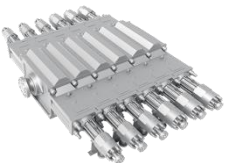
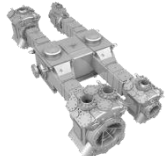

Fabrice Billard, President SYST

Way Forward



Keep Leading Market Position in All Segments

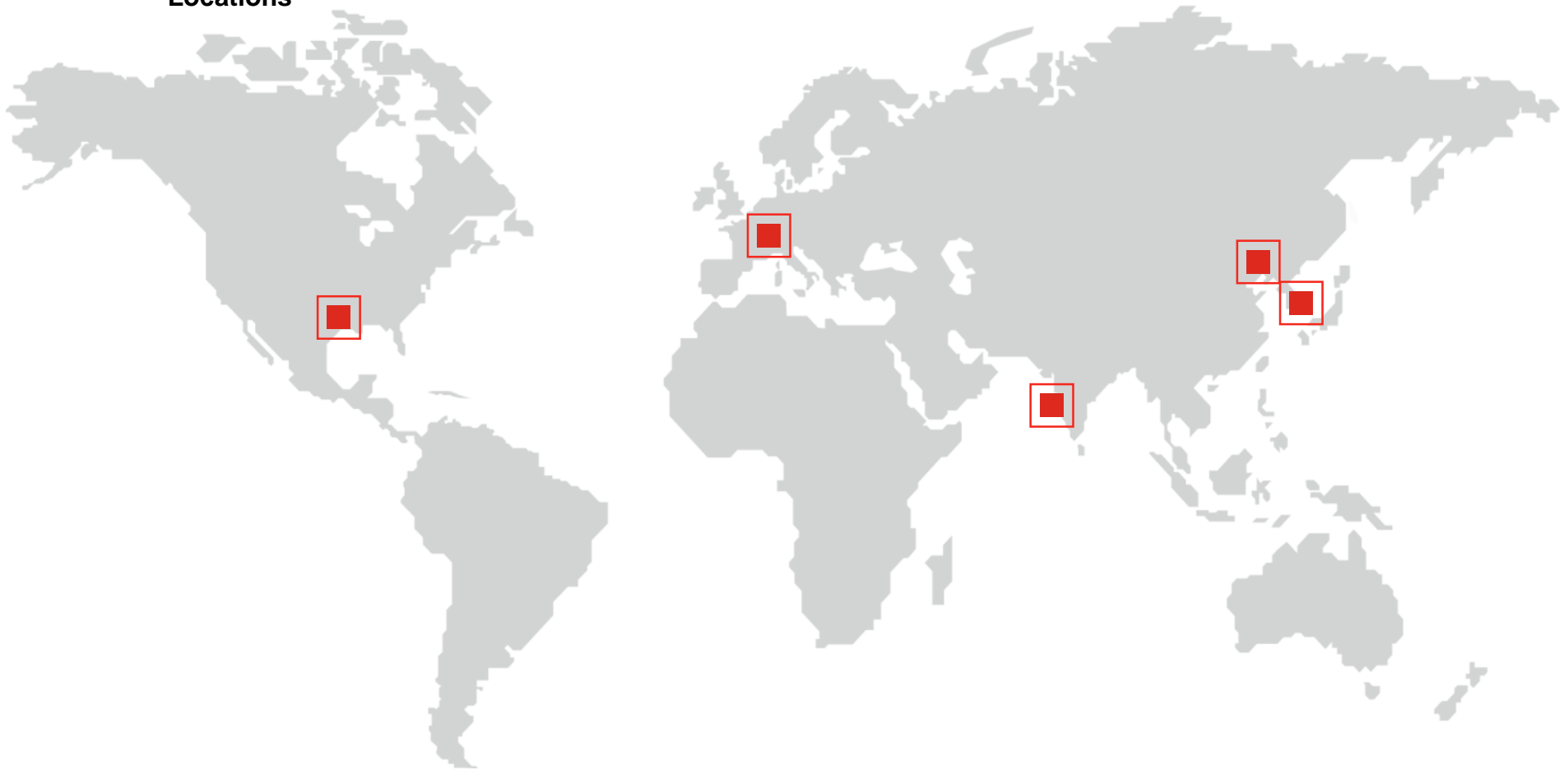
← Keep #1 market position → ← Increase market share →

Products Market	 Laby® Compressors	 Laby®-GI Compressors	 Hyper- Compressors	 Process Gas Compressor API 618	 Standard High Pressure Compressors
Upstream oil & gas	●	●		●	●
Gas transport and storage	●	●		●	●
Refinery				●	
Petrochemical/Chemical industry	●		●	●	
Industrial gases	●			●	●

Qualified Employees Around the World

Manufacturing and Assembly in Key Markets

■ Burckhardt Compression
Manufacturing / Assembly
Locations



Use our Strong Global Presence

BC Manufacturing Locations

Winterthur, Switzerland



Busan, Korea



Houston, TX, USA



Pune, India



Shenyang Yuanda Compressor Co., Ltd.

New Markets, Products and Supply Chain Access

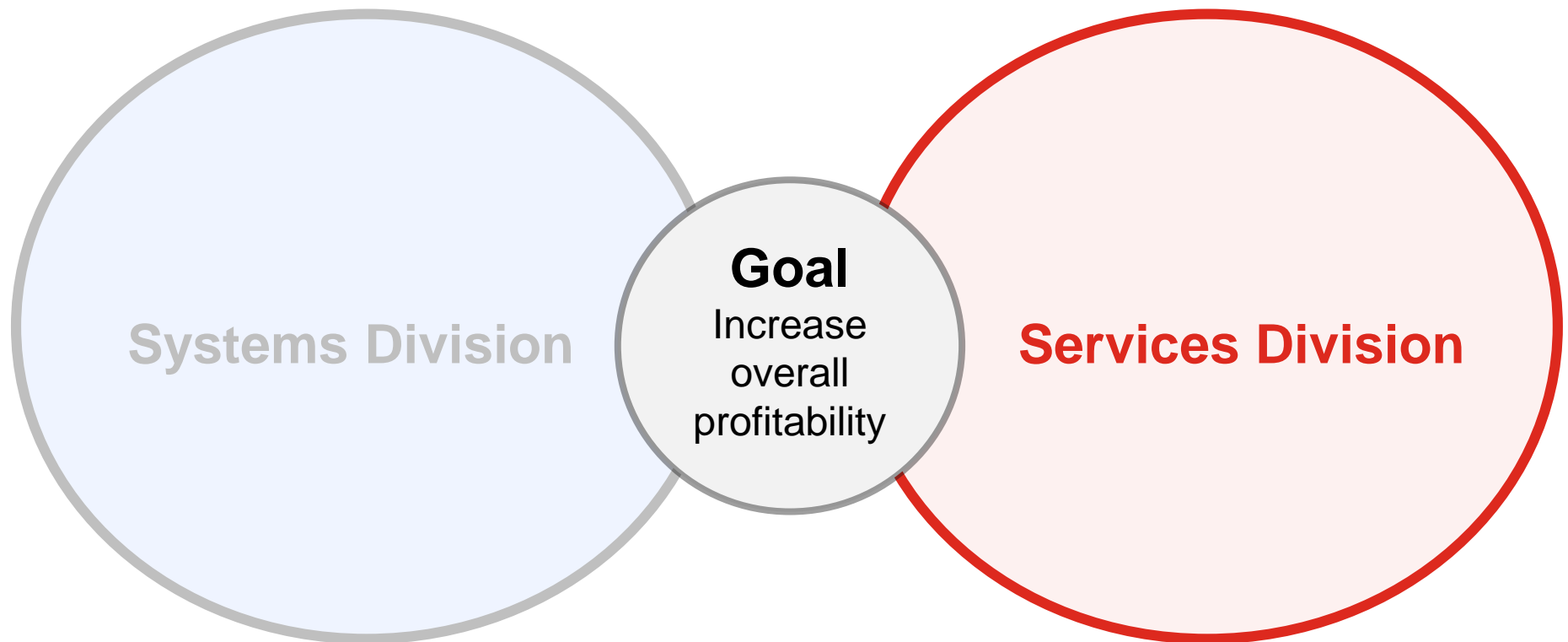
- Number 1 in China
- Compressors for
 - Petrochemical
 - Chemical
 - Oil& Gas industry
- R&D center
- Foundry
- Local supply chain



SERVICES DIVISION (SERV)

Martin Wendel, President SERV

Way Forward



Our Portfolio – To Date Spare Parts are Responsible for More than 50% of the Business

Monitoring

Condition monitoring with emphasis on safety protection and early failure detection.



Engineering Revamps / Repair

Customized revamp, upgrade and repair services based on in-house design & engineering competence.

Field Service

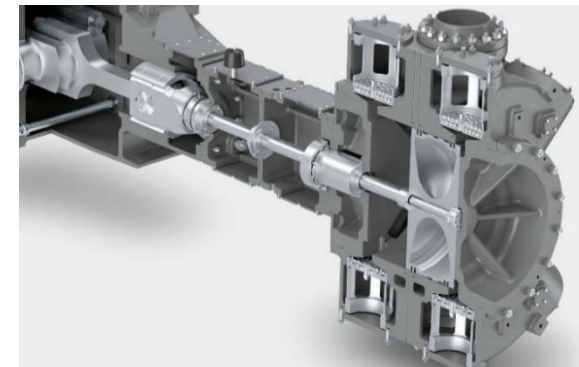
More than 100 Field Service Engineers assist customers with on-site activities worldwide.



Spare parts

In-house produced components, application-specific and designed for optimal performance.

- wear parts (e.g. rings, packings and valves)
- to capital parts (e.g. pistons, cylinders, and crankgears)



Our Regional Set-Up – Strengthened Local Presence through Acquisitions and new Service Centers

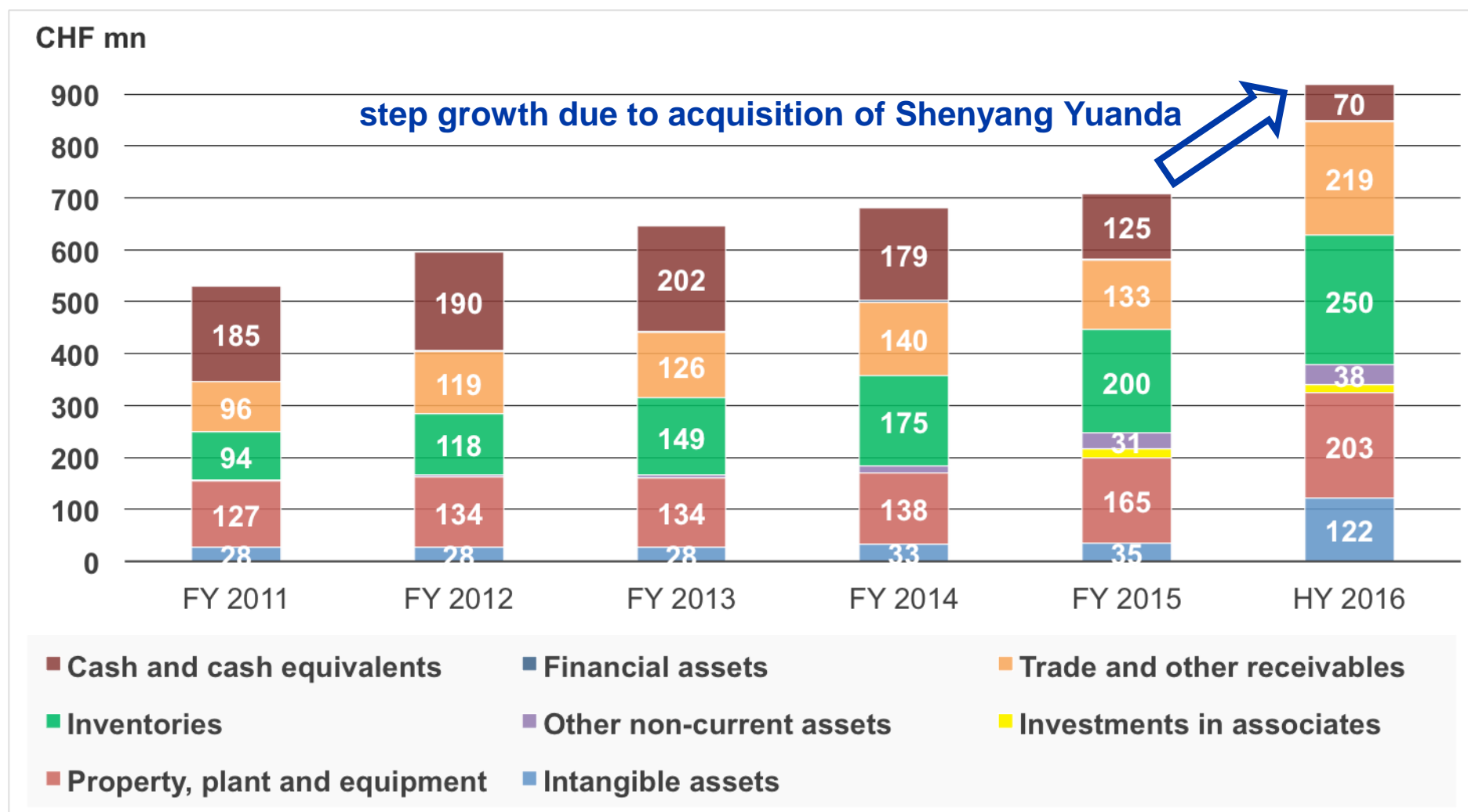
- Acquisition of Shenyang Yuanda and cooperation with Arkos substantially improved local presence in the two largest markets
- Seven service centers have been opened over the past five years and the first small acquisition (Germany) has been completed to increase local business in selected markets



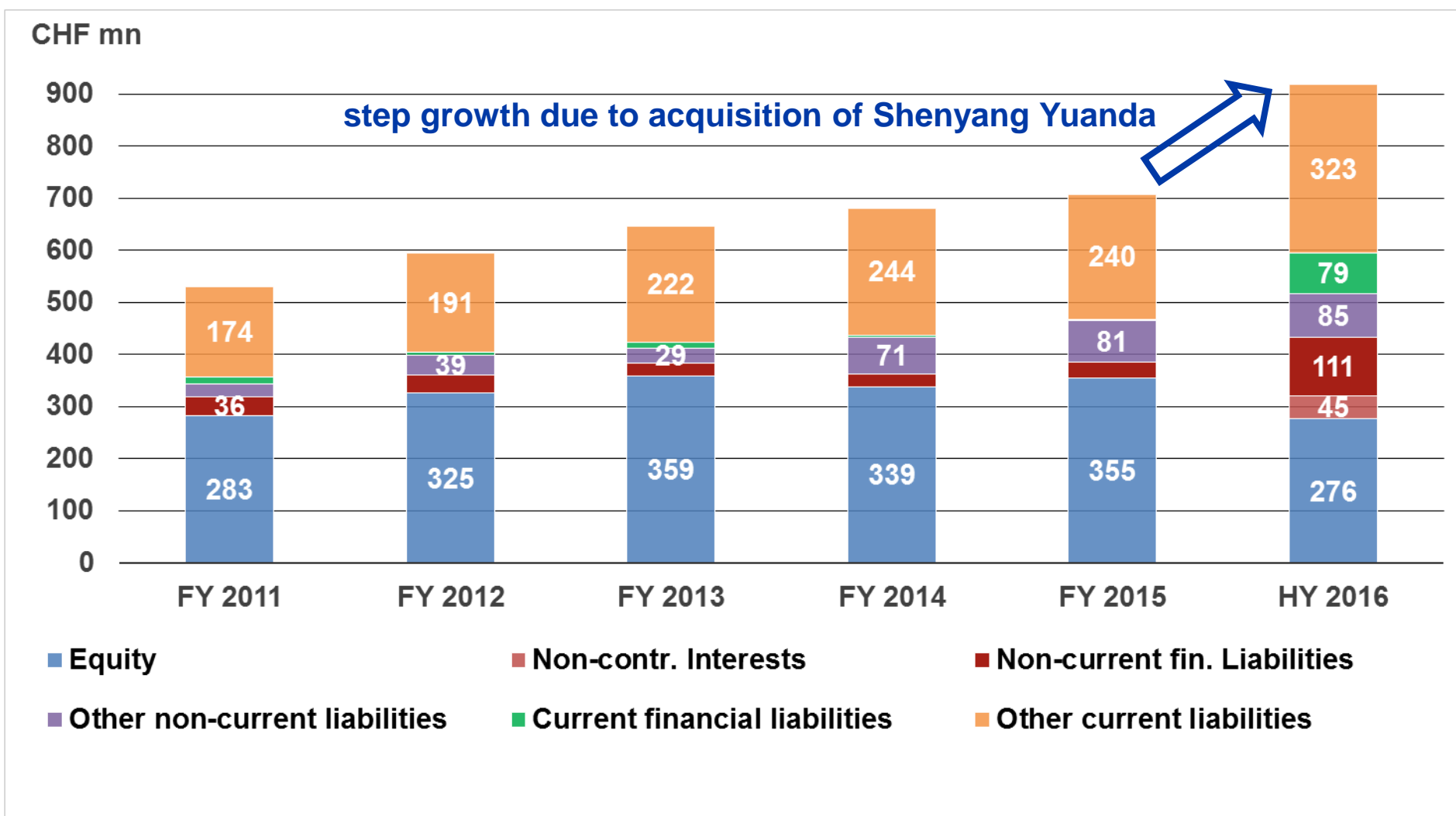
FINANCIAL TOPICS

Rolf Braendli, CFO

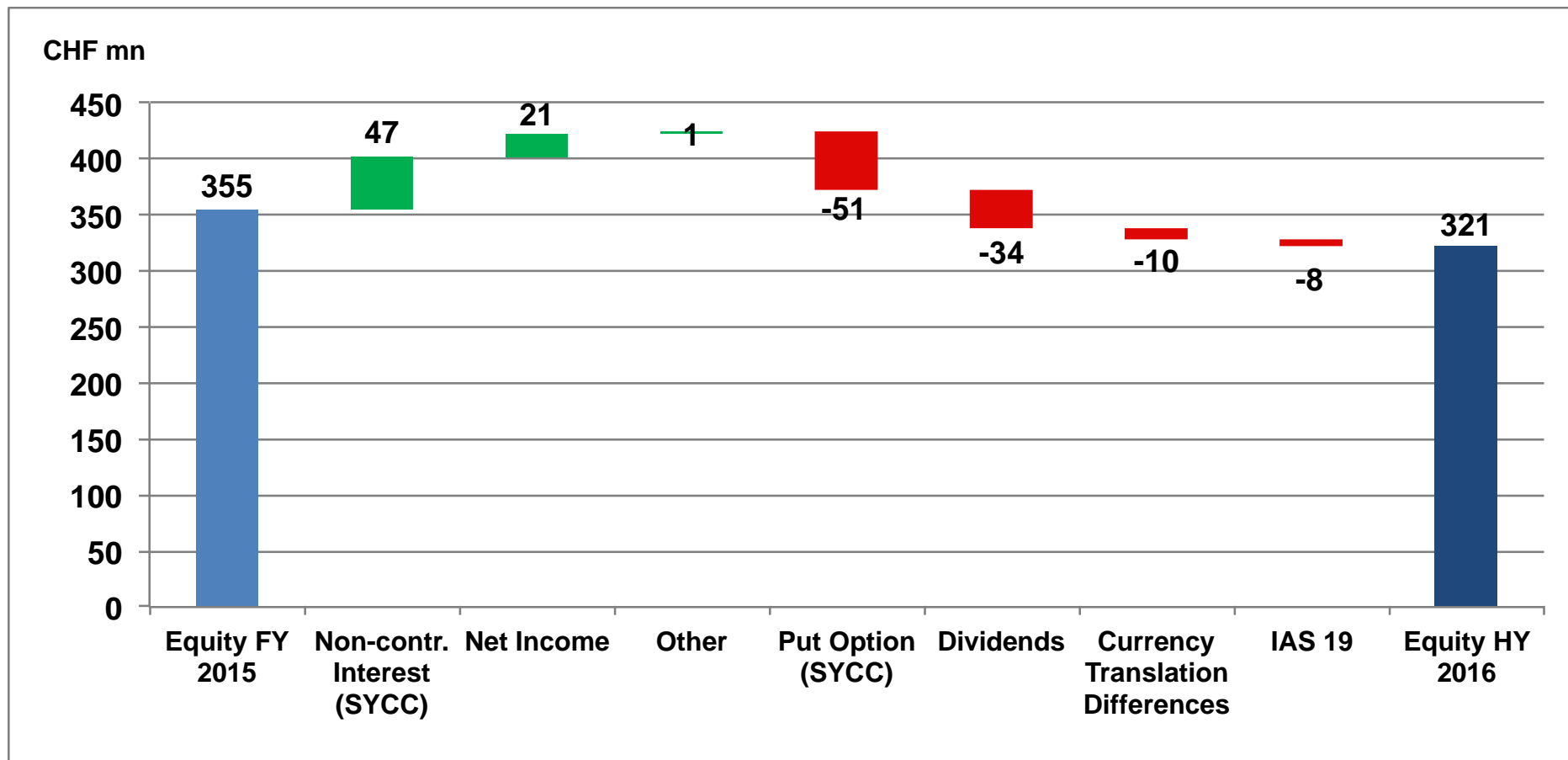
Balance Sheet – Assets



Balance Sheet – Liabilities and Equity

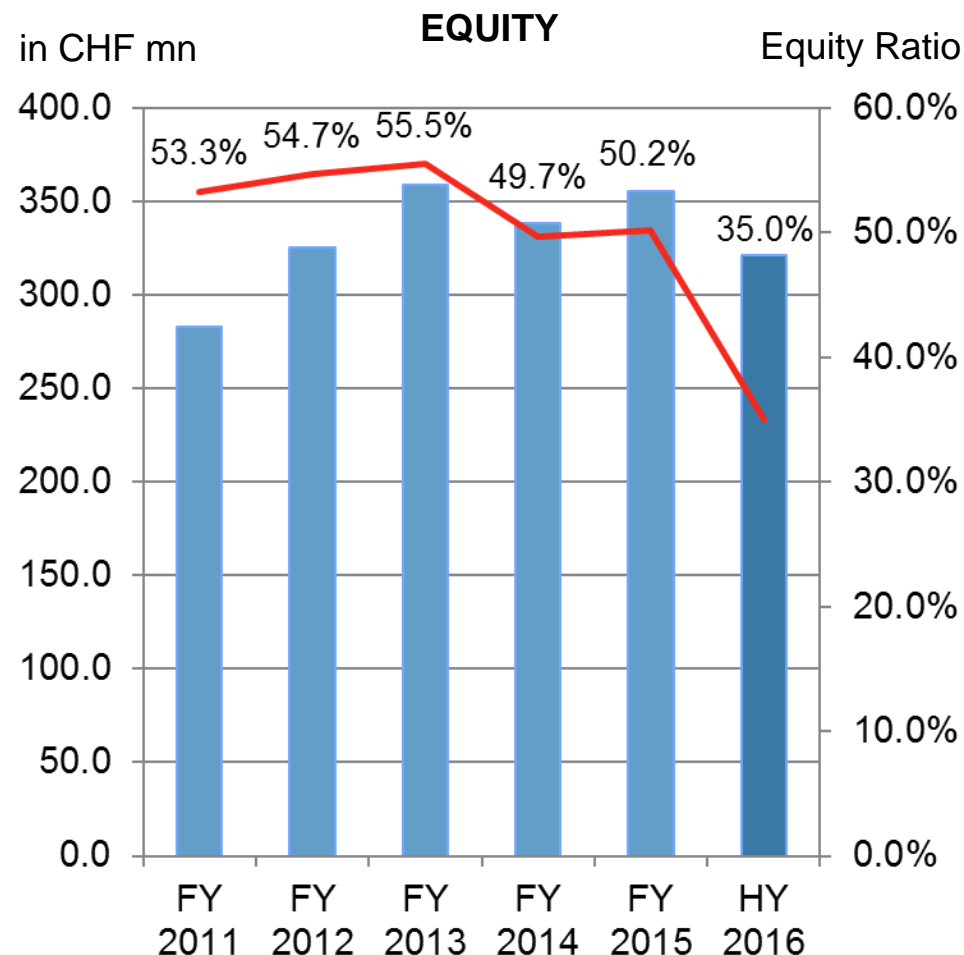


Changes in Equity FY 2015 → 1HY 2016



Equity Ratio

- Equity ratio reduced to 35% due to SYCC acquisition
- Temporary leverage due to partial financing of acquisition with mortgages and loans
- Equity is reduced by CHF 50.7 mn due to recognition of SYCC put option in line with IFRS (NPV of assumed remaining purchase price, based on a pre-agreed EBITDA multiple)
- Equity ratio excl. put option: 40.5%



Shenyang Yuanda (SYCC) Results 1HY 2016

- **SYCC “Operation”:**
 - **Solid performance**
 - **Development of sales within expectations despite challenging market environment in China**
 - **YTD EBIT above expected level**
- **SYCC „Depreciation“:**
 - **Significant impact from depreciation of intangible assets and fair value adjustments (in line with IFRS)**
 - Inventory step-up (WIP); significant part of future gross profit included on the initial balance sheet (purchase price allocation)
 - Moderate (positive) fair value adjustment on real estate

in mn CHF	1HY 2016*) SYCC „OPERATION“	1HY 2016*) SYCC „DEPRECIATION“	1HY 2016*) SYCC TOTAL
Sales	41.0		41.0
Gross Profit	11.1	-2.3	8.8
in % of Sales	27.1%		21.9%
EBIT	5.7	-3.7	2.0
in % of Sales	14.0%		4.8%
Net Income	4.6	-3.1	1.5
in % of Sales	11.3%		3.7%

***) Period of May 1 – September 30, 2016**

Financial Targets

	Guidance FY 2016 (incl. SYCC)	Guidance FY 2017 (incl. SYCC)
Order Intake	CHF 450 – 500 mn	Continued growth in the Services Division; no upturn in the Systems Division order intake expected until FY 2018
Sales	CHF > 600 mn	About CHF 100 mn lower than FY 2016
Gross Margin	Systems Division 10 – 15% Services Division 45 – 50%	Systems Division 15 – 17% Services Division 45 – 50%
EBIT	EBIT FY 2016 < FY 2015 EBIT margin 10 – 12%	EBIT margin 10 – 12%
Dividend Policy	Payout ratio between 50 – 70% of net profits	Payout ratio between 50 – 70% of net profits

BC CULTURE / HR DEVELOPMENT

Sandra Pitt, CHRO

Rapid Globalization



2002 (MBO)

400 employees

3/4 in Switzerland

2016

approx. 2'300 employees

1/3 in Switzerland

Global Well Positioned to Reach our Vision and Goals



- **Built up of new assembly sites in South Korea and USA**
- **Acquisitions in China and Germany**
- **Cooperation in USA**
- **Subsidiaries in over 20 countries around the globe**

Development of Corporate Culture

- Development of our Corporate Culture from a Swiss-centric company to a truly global company
- Burckhardt Compression Values evolved to reflect our global partnerships and our culturally diverse workforce



Partnership



Performance









Cooperation

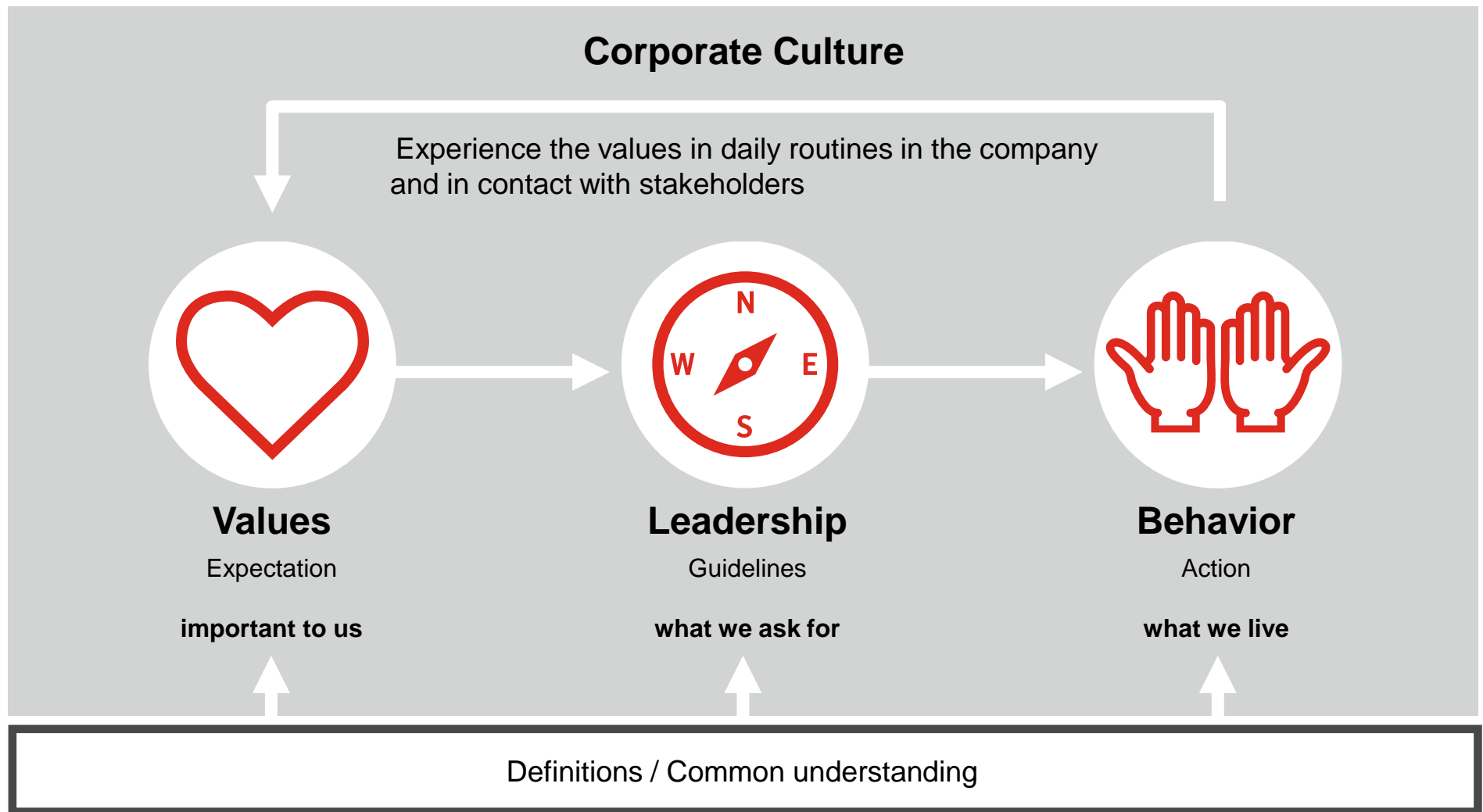


Dedication

Behavior

Success Factors As BC employees, we ...	Description As BC employees, we ...	Behavior
 Think Customer	... keep internal and external customers at the core of all thought and action	<ul style="list-style-type: none"> • Build relationships • Demonstrate quality focus • Live service orientation
 Take Ownership	... actively seek and own responsibility for success	<ul style="list-style-type: none"> • Show initiative • Focus on results • Create lasting solutions
 Act Decisively	... demonstrate courage and act with agility	<ul style="list-style-type: none"> • Take considered risks • Demonstrate agility • Persist without fear of failure
 Build Engagement	... inspire people to perform and grow	<ul style="list-style-type: none"> • Align goals • Develop self and others • Inspire people
 Break Barriers	... break silos and boundaries to be One Burckhardt	<ul style="list-style-type: none"> • Promote collaboration • Embrace diversity • Transfer knowledge
 Champion Change	... embrace opportunities for growth and improvement	<ul style="list-style-type: none"> • Remain adaptable • Support people • Adopt new practices

Our Framework



Elements of the Training & Development Portfolio

1
2
3

Leadership Training

Leadership training based on the Values and Behaviors of Burckhardt Compression Level 1-3

IMDP

Talent program for leaders

Sales Training

Training for Sales Managers and for Sales Force

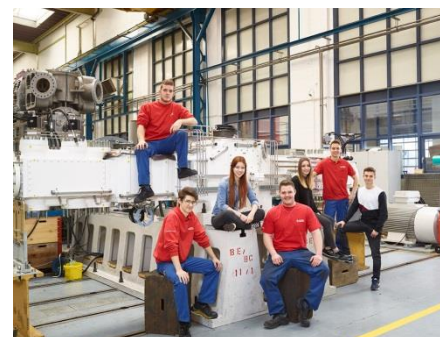
4
5

Technical Training

Field Service Training, Laby®, Laby®-GI, Process Gas Compressor, Hyper Compressor etc.

Local Training

English, Project Management, Customer Training, Lean Management etc.



BC Education Campus

Corporate Training

Leadership, Development, Capability, Onboarding

Technical Training

Field Service Training, Laby®, Laby®-GI, Process Gas Compressor, Hyper Compressor
Quality, Marketing & Communications, Sales, Contracting, SERV, F&A

Customer Training

Compressor Technology Trainings

MARKET OPPORTUNITY ISO 13631 “HIGH-SPEED APPLICATIONS”

Mauro Callioni, Head Applications

Market Segments and Applications

- **Upstream Oil & Gas**

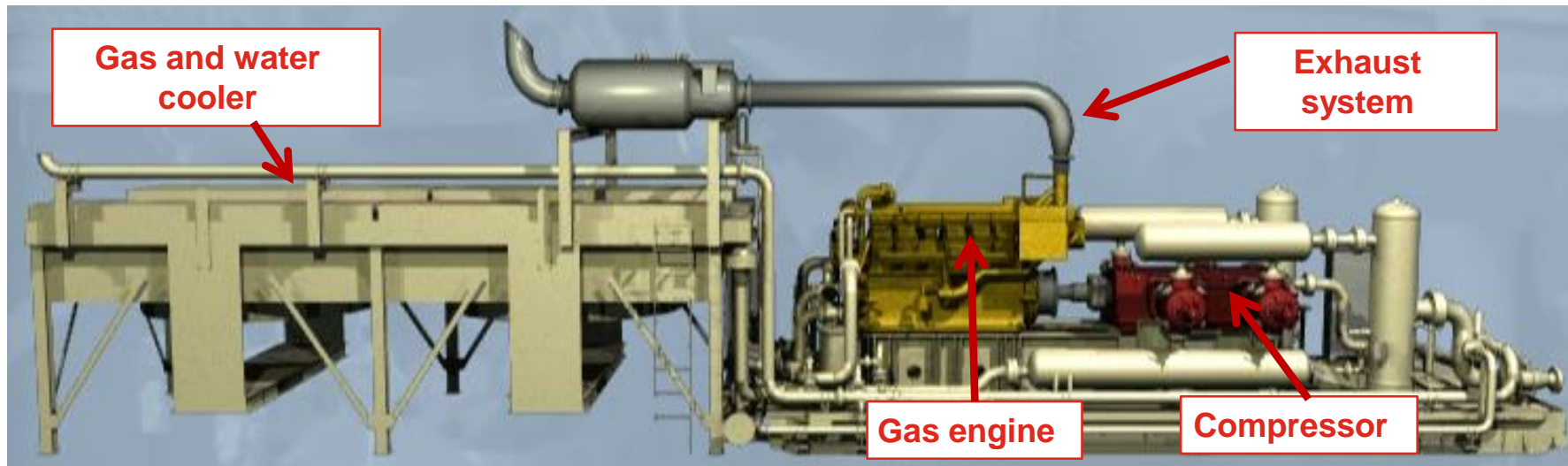
- Injection / withdrawal (Storage)
- LNG FPSO
- Gas gathering (Well Head)
- Gas processing (H_2 , CO, Ethane)
- Gas lift (oil production increasing)
- Unconventional gas (i.e. coal bed methane)

- **Gas Transport & Storage**

- Gas transmission (LNG terminal, pipelines)
- Fuel gas boosting (Turbine Feed)
- Gas boosting station



High Speed Packages



Definitions and Differentiations

	API 618	ISO 13631 (previous API 11P)
Manufacturer	Burckhardt Compression	Shenyang Yuanda
Design	Moderate speed (< 1000 rpm)	High speed (> 1000 rpm)
Driver	Electric motor	Gas engine
Cylinder cooling	Water cooled	Air cooled
Service intervals	2-3 years	4-6 months because gas engine
Life time	40-50 years fix installed	20 years mostly movable Large secondhand market Large rental market
Customer requirements	Highly specified due to API 618	Cost optimized standard packages
Engineering	Highly customized product	Highly standardized product

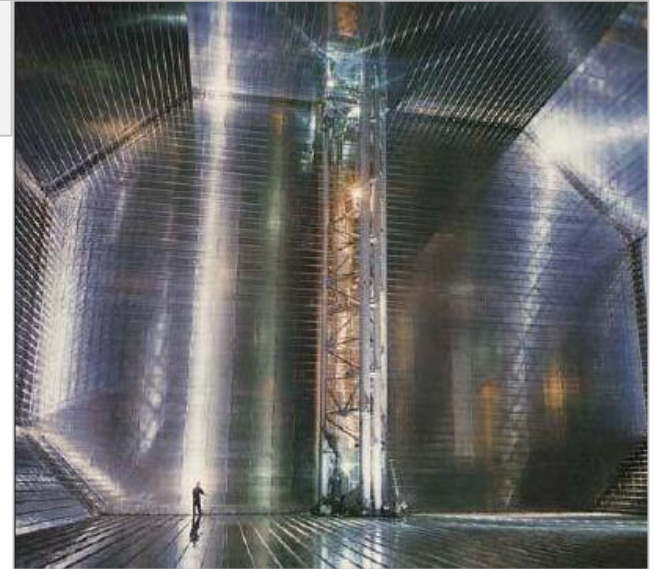
LNG DUAL-FUEL

Rainer Duebi, VP Design & Manufacturing

LNG (Liquid Natural Gas) Carriers

- **First ship in operation since 1980**
- **Transport of liquefied methane gas at cryogenic temperature (-164 °C) in state of the art insulated cargo handling system**
- **Up to 250'000 m³ liquid volume per carrier transported from producer to consumer**

Membrantank; typically used by 70% of all operating LNG carriers



- **Even insulated BOG (boil of gas) of the cargo can not be prevented in the range of 0.1% per day**
- **Use of the BOG as fuel to drive the ship or liquefied on board**

Innovative and Technical Advantage

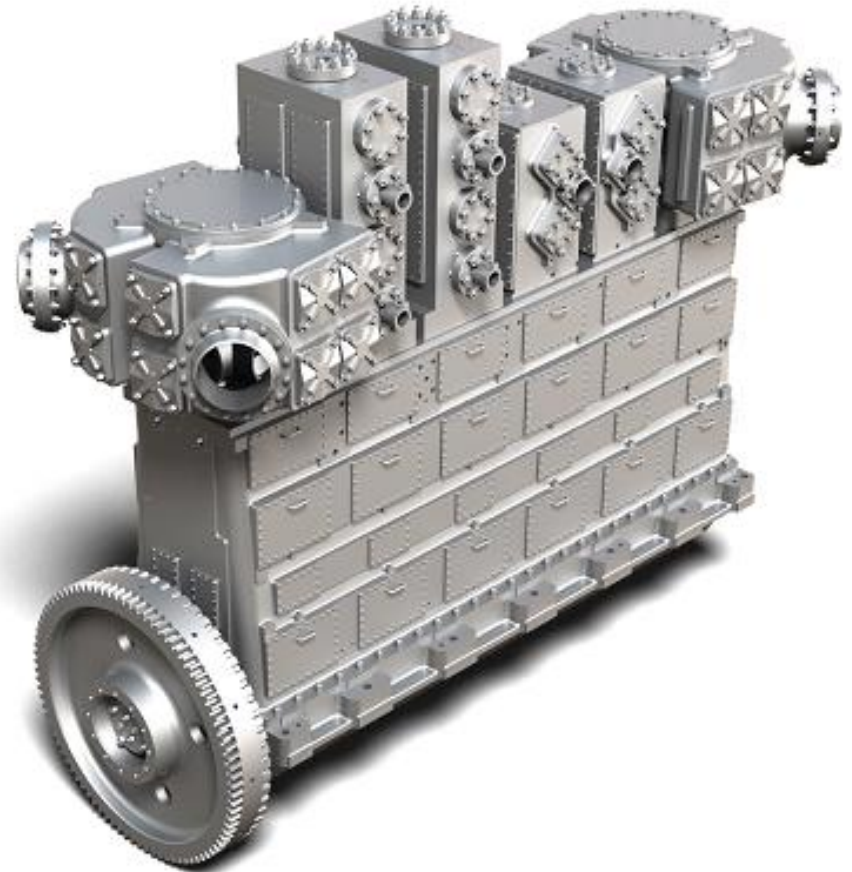
- **Advantage of the new propulsion systems**
 - **Simplified system compared to old complex steam turbine propulsion System (In Use up to 2002)**
 - **High efficiency (50%)**
 - **Reduced fuel consumption**
 - **Less emission (-25% CO₂)**
 - **In combination with reliquefaction: Increased delivery volume of cargo**



*«Creole Spirit» at DSME Yard,
S. Korea delivered in Feb. 2016*

Laby®-GI Compressor

- **Developed for the use on LNG carrier with state of the art membrane tank system**
 - **Weight balanced of the moving parts – Less vibration induced to ship**
 - **Use of cryogenic material to take the BOG at -165 °C**
 - **Highly reliable Laby® technology (in use since 1960 on LPG carrier)**
 - **High pressure Redura® technology for save and efficient compression up to 300 bar**





Burckhardt Compression

Compressors for a Lifetime™