

**Regaining business for
Stadtwerke Ullerbach**

Executive Summary: Stadtwerke Ullerbach is recommended to

1 Market Overview:

- The decline of coal-fired power generation year by year leads to the decline of company performance, which will be worsen in following years
- Profitability of distribution is declining within years. Current market is foreseen to shrink
- Sales & service business encounters high cost and fierce competition problems. However, changes in the market provide great opportunity

2 End-game strategy:

- It is suggested that SU divest in coal-fired generation business quickly and only focus on its renewables
- It is suggested that distribution business adopt a niche strategy
- It is suggested that sales business divest in B2B, and adopt a leadership strategy in B2C

3 New business model

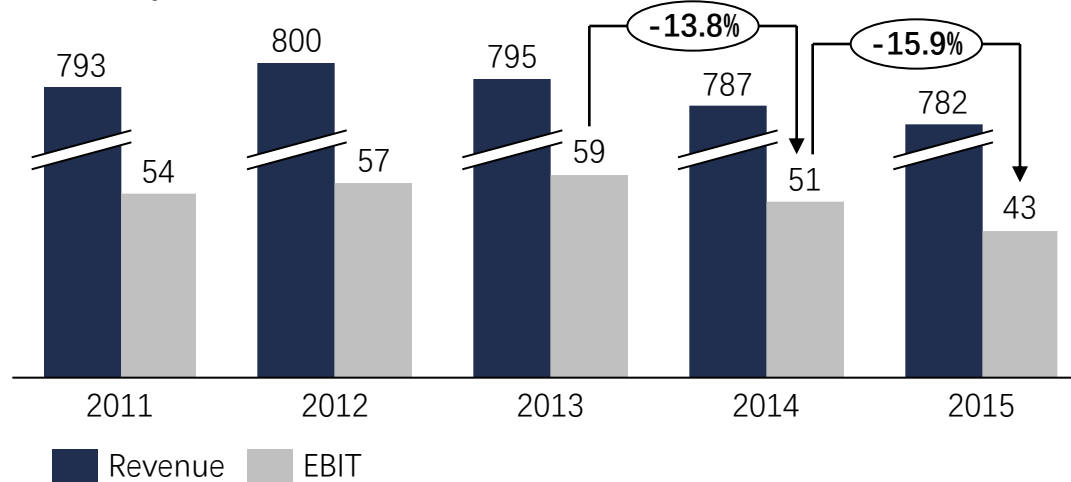
4 Financial forecast & milestone

The decline of coal-fired power generation year by year leads to the decline of company performance, which will be worsen in following years

Generation

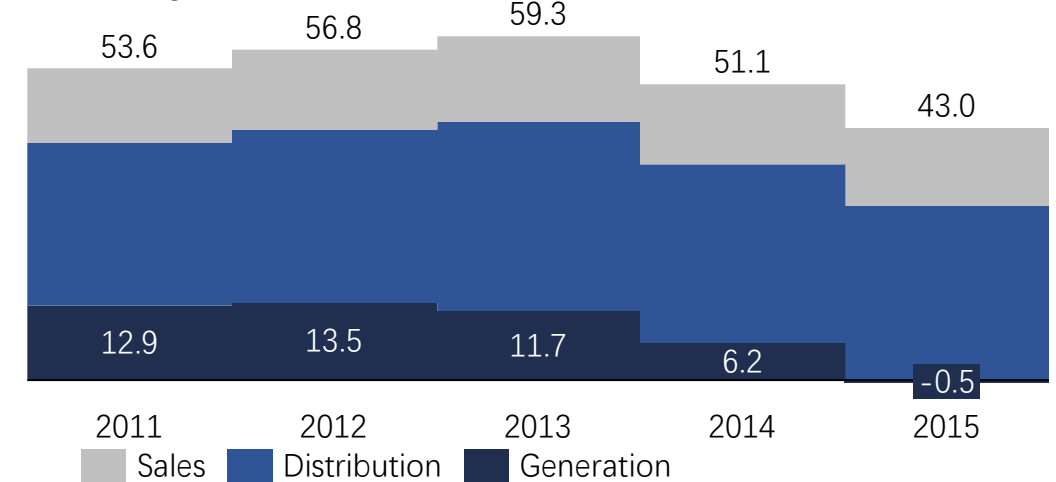
1 SU* is suffering from decline in recent years

Financial performance of SU, 2011-15, EUR m



2 Shrinking in conventional generation accounts for it

EBIT along value chain in SU, 2011-15, EUR m



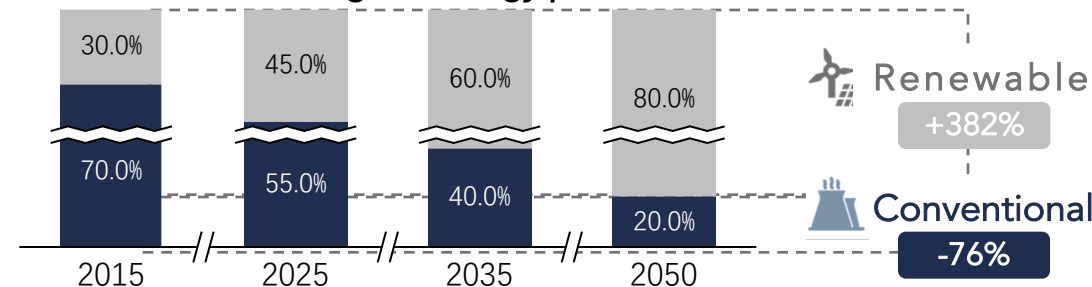
3 Major factors contribute to the decline in conventional generation in energy system

Reduced demand

Low wholesale price

New trends

Prediction of share of gross energy production, 2015-50



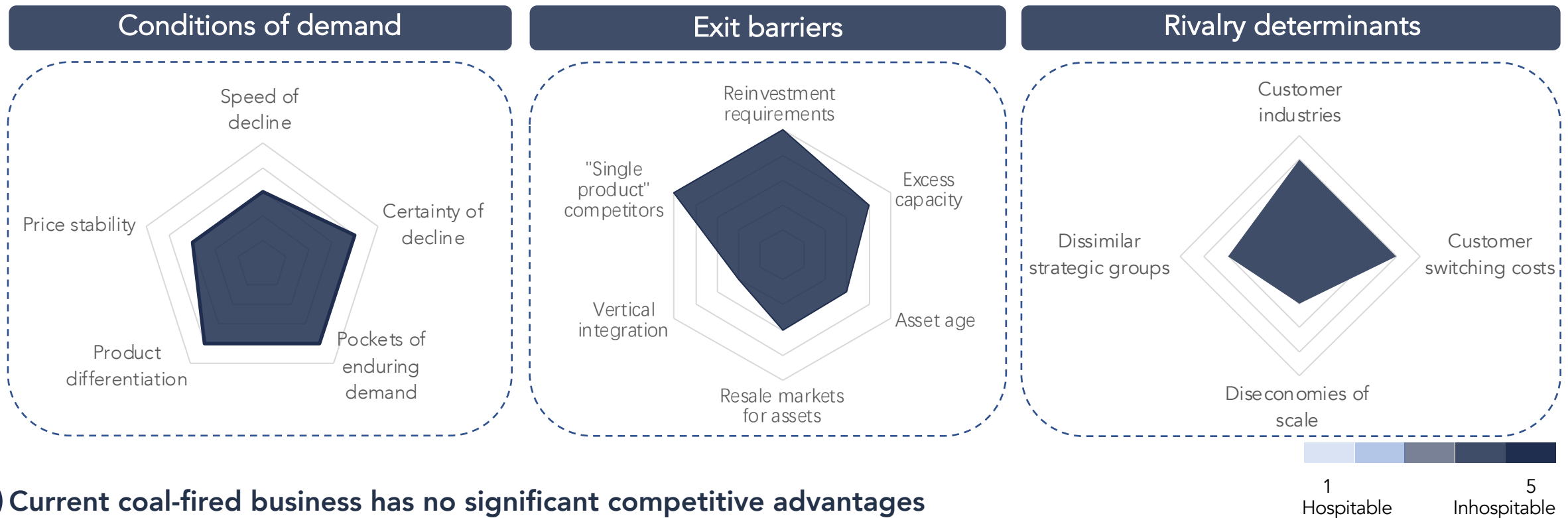
Utility firms are almost entirely unable to compete on price

- Switching costs is low
- Product is undifferentiated
- Free market mechanisms

- Technology advance will enable zero-marginal-cost energy production
- Decentralized generation structure will harmonize flexible with demand

It is suggested that SU divest in coal-fired generation business quickly and only focus on its renewables

1 The market structure of coal-fired generation is inhospitable

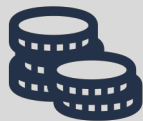


2 Current coal-fired business has no significant competitive advantages



Profit not guaranteed

EBIT declined from 12.9m to -0.5m in 5 years' time



Inadequate capital

Fixed assets for coal-fired generation takes up nearly 39% of total asset, with inadequate capital for development



Small-scale coal resource

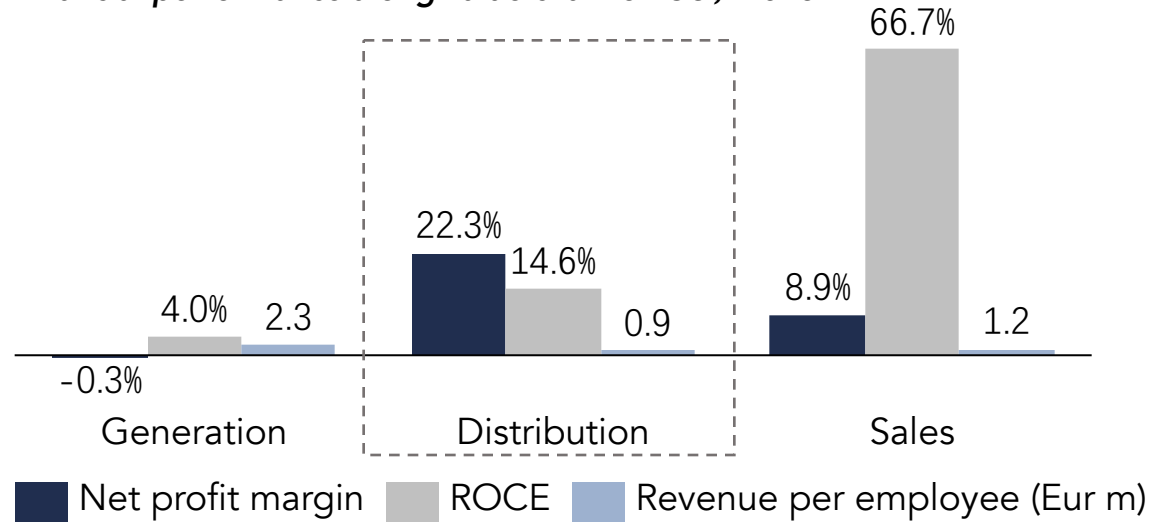
Compared with other companies, a 200 MW coal-fired plant is not competitive

Profitability of distribution is declining within years. Current market is foreseen to shrink

Distribution

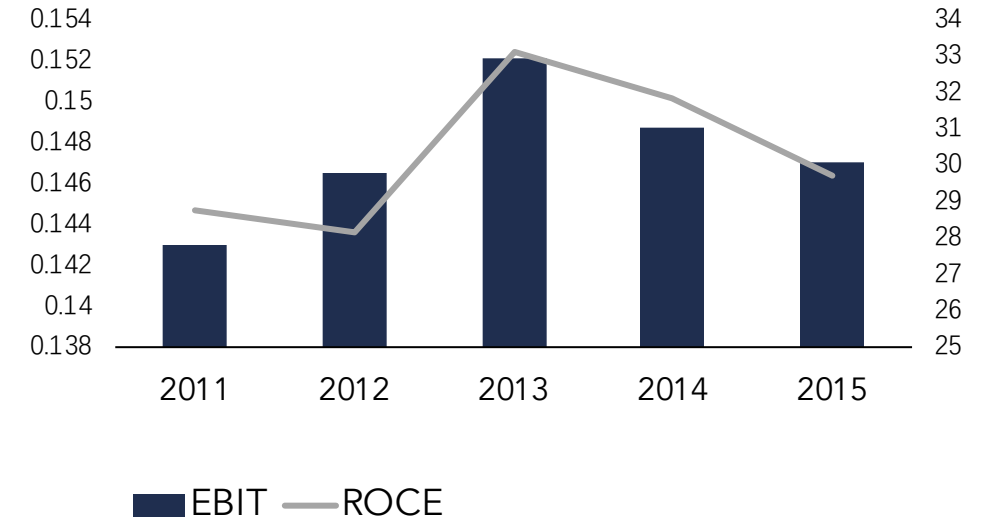
1 Distribution is profitable, requiring much resource

Financial performance along value chain of SU, 2015



2 However, profitability is declining in recent years

Financial performance of Distribution of SU, 2011-15



3 Profitability is yet promised in old markets due to rapid changes

Pressure on margin

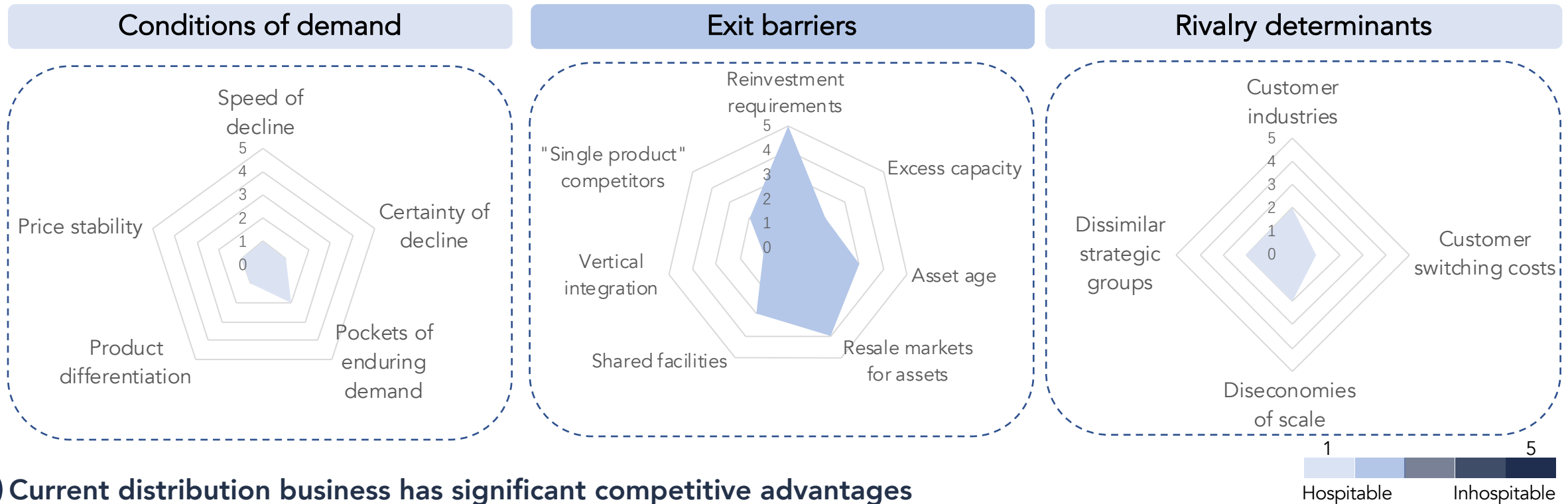
German Federal Grid Agency reduces ROE for 3rd regulatory period in 1-3 years, for 4th period in 4-8 years, resulting in further pressure on margin

Reduced in volumes

- Micro-grid : push the trend of decentralization into reality, reduce the demand for high-volume grid
- Storage: change the market fundamentally, reduce reliance on current grid

It is suggested that distribution business adopt a niche strategy

1 The market structure of distribution is hospitable



2 Current distribution business has significant competitive advantages



Profitability guaranteed

Distribution has always been high profitable



Autonomy of decision

Grid company "Netzgesellschaft Ullerbach" is a 100% subsidiary of Stadtwerke Ullerbach



Available resources

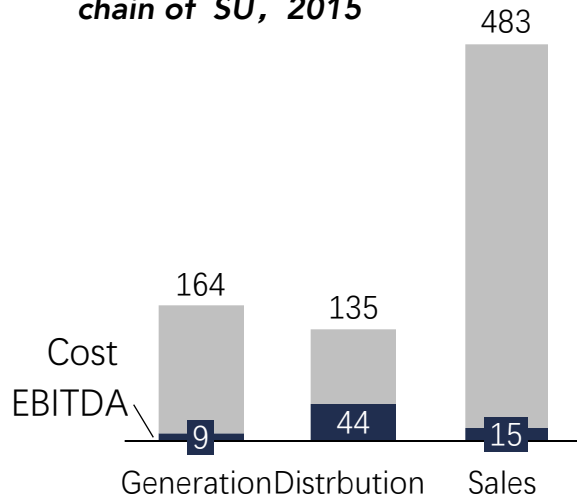
SU has a historically grown large distribution grid because of the regional factors present in the distribution area

Sales & service business encounters high cost and fierce competition problems

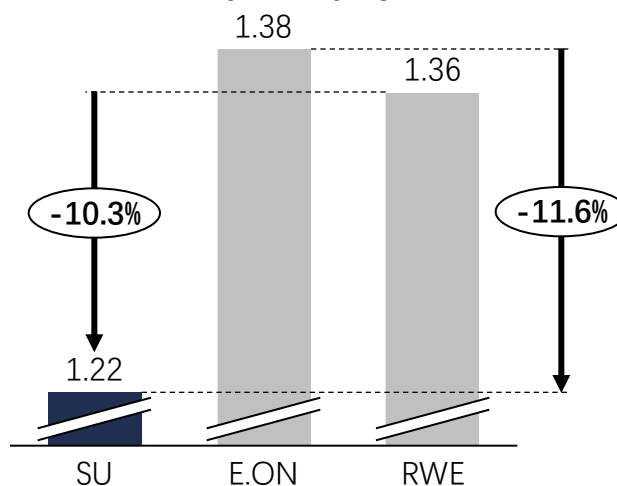
However, changes in the market provide great opportunity

1 Present sales business is cost-ineffective

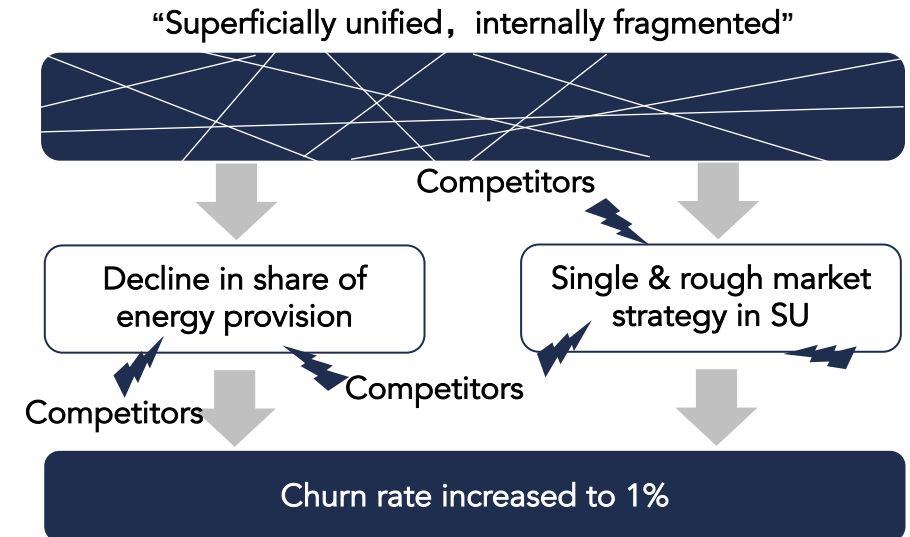
Financial performance along value chain of SU, 2015



Sales revenue per employee, 2015



2 Comparison reaches SU's customer base

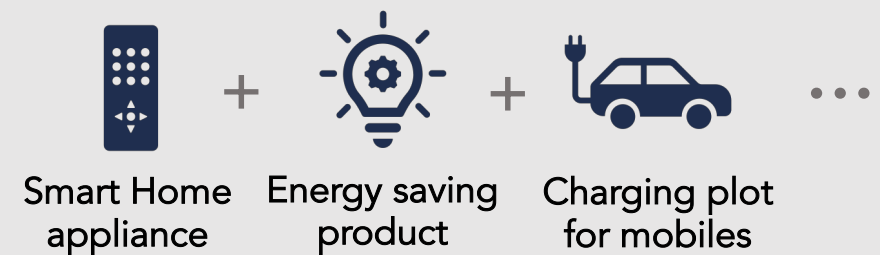


3 Changes in customer portrait and extended value chain will further limit current business

Changes in customer portraits

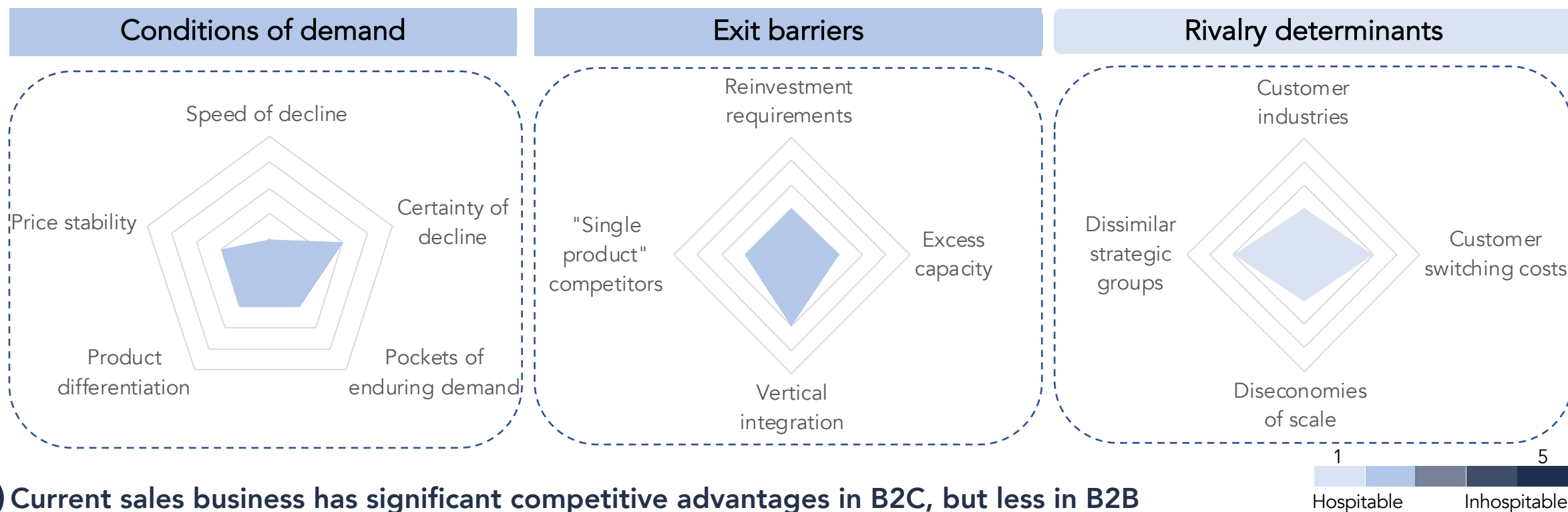
| | | |
|---|---|--|
| Energy-saving focused As savings increase, switching volume decreases | Price sensitivity Customers hand over provider decision to price comparison | Personalized Customers pursue personalized offer & billing |
|---|---|--|

Extended value chain







It is suggested that sales business divest in B2B, and adopt a leadership strategy in B2C

1 The market structure of sales is hospitable

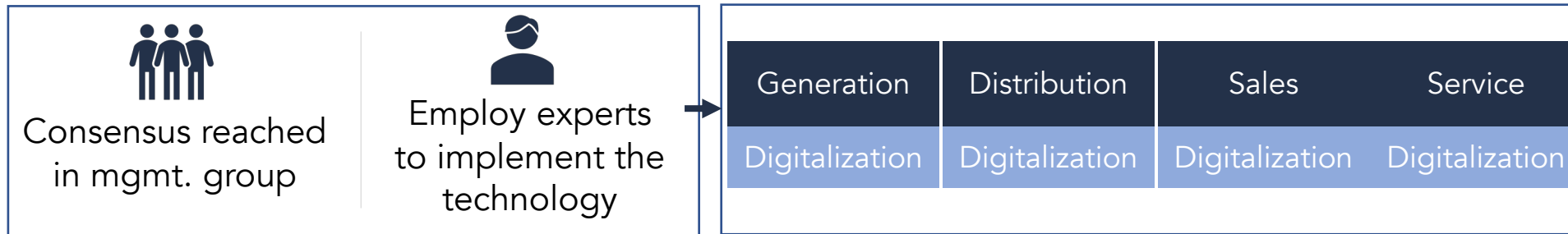


2 Current sales business has significant competitive advantages in B2C, but less in B2B

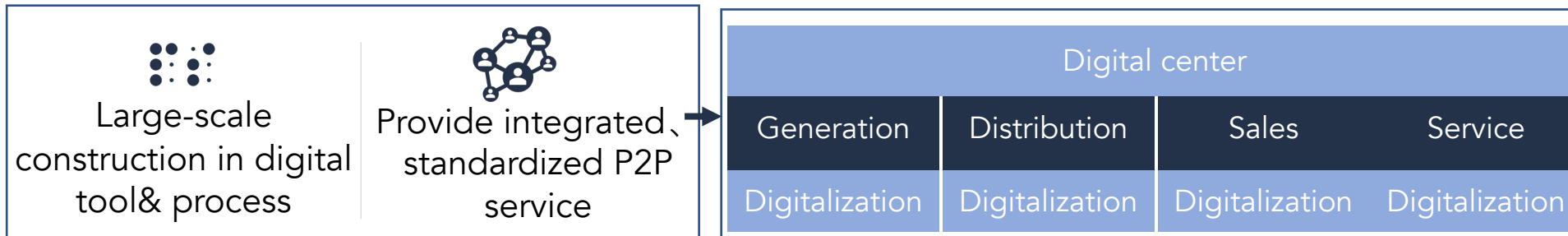
| B2C | | B2B | |
|---|---|--|---|
|  Profitability guaranteed <i>Sales has been profitable, with high ROCE</i> |  Favorable customer base <i>SU has a ~480,000 customers, with 50% of customers in basic energy provision</i> |  ~0 margin <i>Increasing price pressure And low entry barreir</i> |  Unfavorable distribution <i>Few customer from this region</i> |

Embrace the trend of digitalization

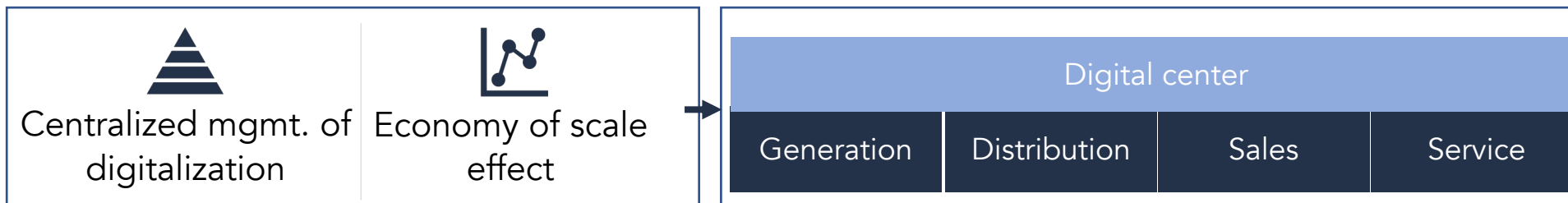
1 Take active preparations for digitalization



2 Implement centralized digital department



3 Integrate digitalization into the culture of business



Generation

- Predict demand
- Adjustment on asset sizing

Distribution

- Supplier mgmt.
- Network mgmt.

Sales

- Reduce in personnel cost

Service

- Customer portrait
- Value-added data mgmt.

New business model for sale & service business

Pre-sale

Design a new brand story



"Save squirrel Jack"

The squirrels Jack has lost his family and living place due to traditional generation.

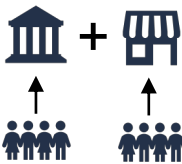
Realizing this, SU is making

various effort, eg: providing energy with renewables, to help homeless animals reconstruct their shelters.

+

Increase its brand presence

- **E-marketing:** Display brand story on its official website



- **Offline campaign:** Exhibition of Its concept. Enhance interactions with potential customers

Sale

Multi-product line

Divest from coal generation

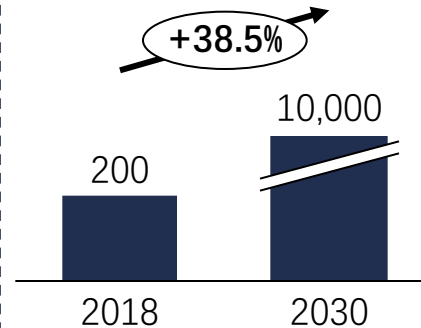


Further investment



Investment in Ubitricity

Prediction of no. of electric cars in German



- Charging service with lamp posts
- Mobile metering solution

After-sale service

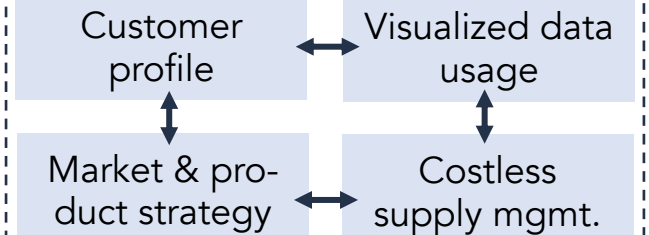
Maintenance

Door-to-door service in one- hour 's time



Using digital platform to optimize human resource allocation

Value-added data mgmt.



Platform

Payment :



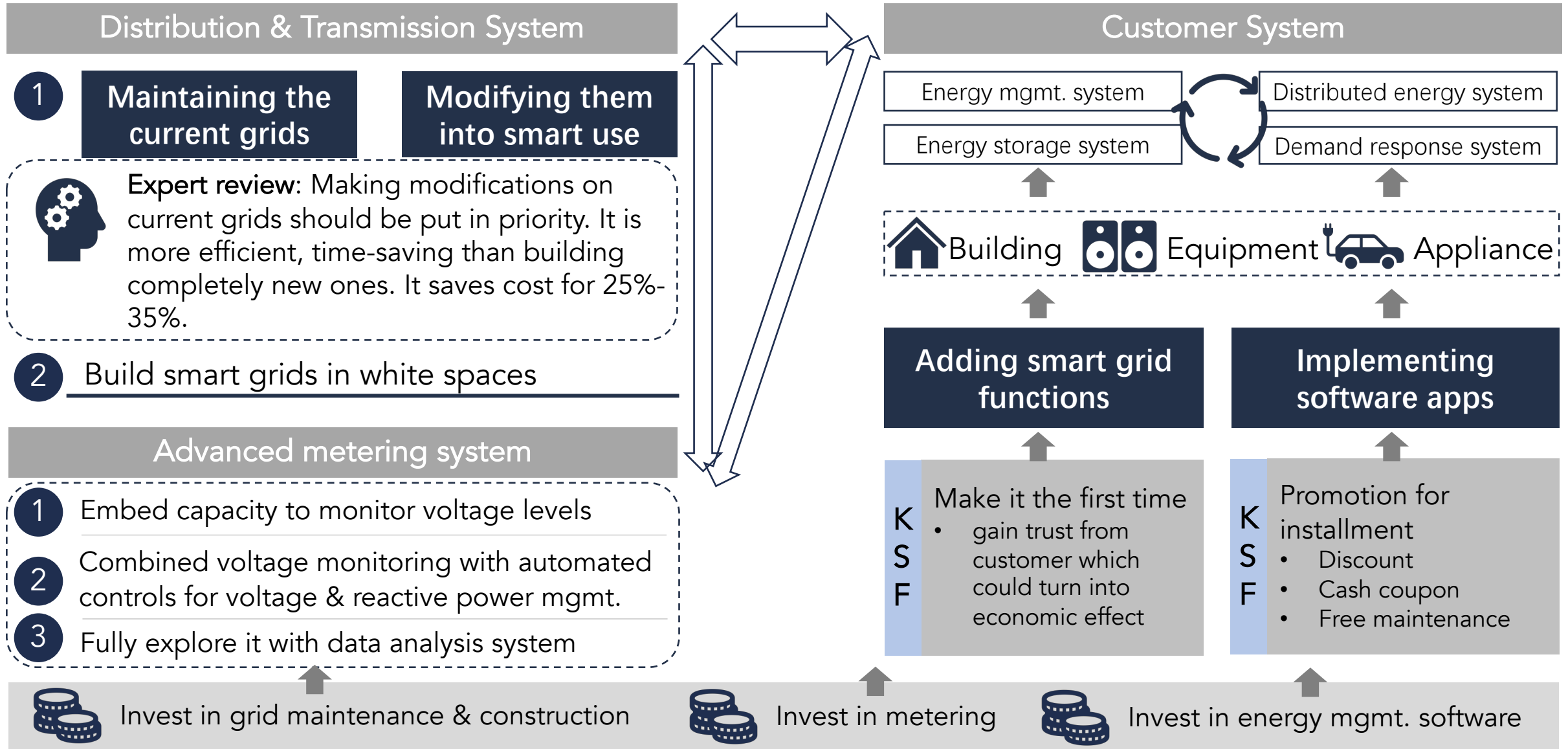
Integrate various payment gateway

Connection:



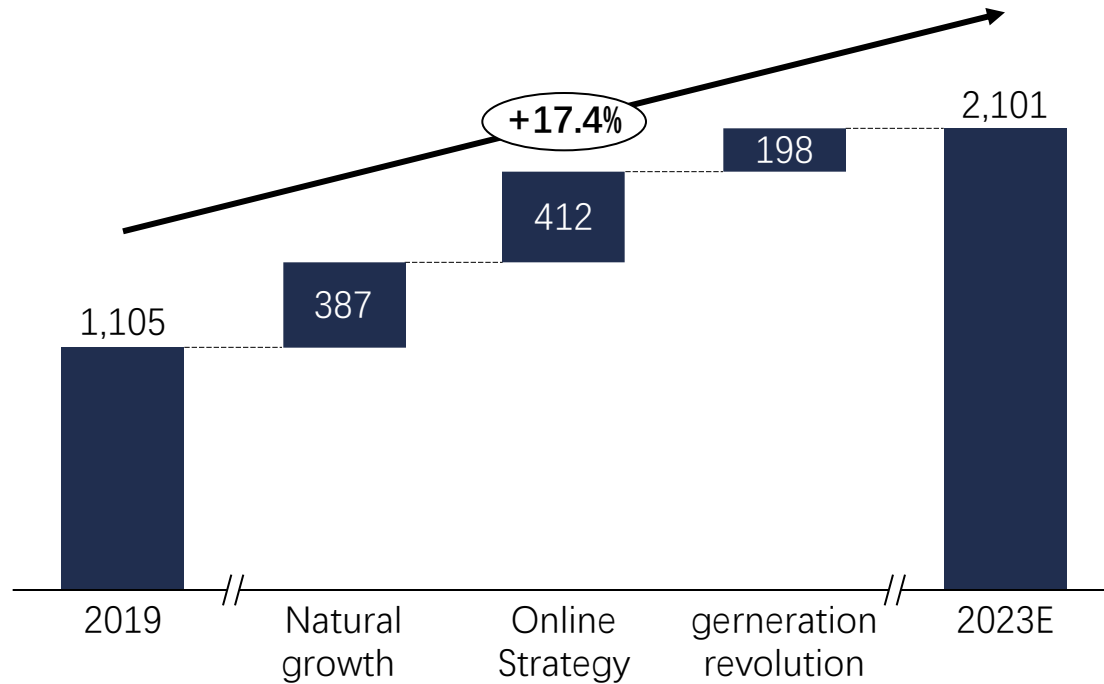
24hr E-chat box service
Online artificial consult

New business model for distribution business



Financial forecast

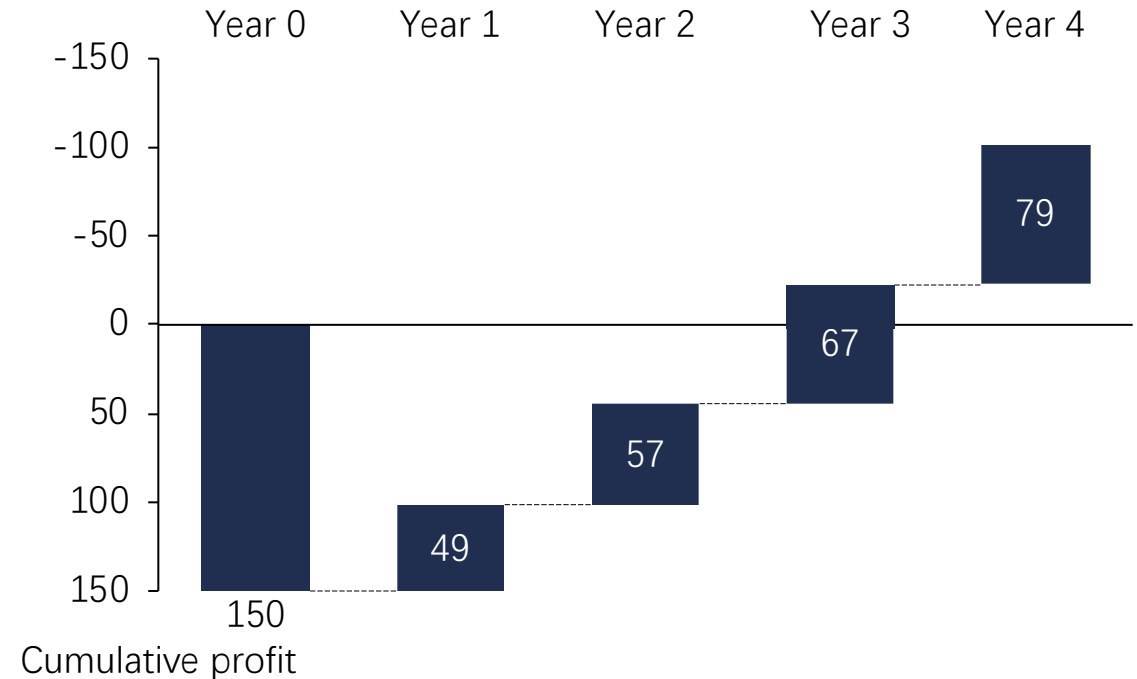
1 Achieve 2101 Eur m by the end of 2023



Key assumptions:

1. Revenue's current natural growth rate is 7.8%
2. Online strategy can increase revenue by 27.6%
3. The revolution of generation business increase revenue by 10.4%

2 Investment is expected to be breakeven in 3 years



Key assumptions:

1. Gross profit margin is 3.75%
2. The profit from the sale of coal generation business is 20 mn.
3. The investment of digitalization strategy and generation business revolution is 170 mn.

Milestone & pitfalls for the new business strategy

1 Milestone

2019

Divesting completely from traditional generation
Realized transformation into renewables

2023

Initial investment to be breakeven

2030

Realized digitalization-integrated value chain

2 Possible pitfall

- Deteriorating macro environment
- The decline of the whole industry
- The difficulty in the revolution of the generation business
- Failure in technology of digitalization
- Large-scale extra unexpected investment