



WHITE PAPER

The future of energy retail centres around agile business models and processes

Allowing for personalisation and complete customer centricity



Advanced
Technology
Partner

Introduction

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How can utilities become truly digital to overcome emerging challenges?

The global energy and utilities industry is often viewed as a monolithic system, but it is very important to understand that the systems in each region, nation and state have their own underlying characteristics.

Around the world, there are 57 overseas territories and dependencies and 193 nation states. Between each of these are numerous electric systems and grids, all with their own technologies, regulations, and government supervision.

Even countries that appear similar or are part of the same regional bloc exhibit several underlying differences in the way they operate at a national or state level. For example, the United States, a tier 1 developed economy, still does not have consistent deregulation across multiple states. In the EU, Hungary and Estonia are still not completely deregulated. And in Asia, developed economies such as South Korea are still completely regulated while other countries have deregulated their local gas and electricity sectors.

This variance in cross-nation operating model was originally due to historically valid reasons. Until the turn of the century, the energy industry was primarily shaped by a long-term perspective. Due to high investment requirements for power generation and network infrastructure, and highly concentrated markets dominated by integrated utilities, the value generated once a foothold in this area had been established could be retained over decades.

This modus operandi is being challenged by multiple emerging trends across the globe, which are having a ripple effect across economies, based on the technological and regulatory maturity of the regions the utility is operating in.

Some of the key trends which are having an impact on the energy and utility industry are:

1. Self-Serve & customer at the core

Customers are increasingly expecting a more “Amazon”-like experience when dealing with utilities and are keen to take control of their experience and consumption patterns. The smart home market (which is primarily driven by smart meters) is expected to balloon to \$138 billion by 2023 and more and more investments are being poured into improving the overall customer experience.

2. Increased focus on renewables

Low-cost storage is expected to shift demand towards renewables alongside a global regulatory push towards sustainability. The International Renewable Energy Agency (IRENA) estimates that to meet the goals of the Paris Agreement, the share of renewables in annual global electricity generation needs to increase from the current position of 25% to 86% by 2050. On a global basis, traditional providers are being challenged, and conventional utility providers are increasingly struggling to achieve an adequate ROI. Competition is arising not only from small, challenger brands but also technology companies such as Google, Amazon and Walmart that have been setting up their own solar plants.

3. Regulated and deregulated energy markets

Regulations are slowly but surely turning away from 'cost-of-service' models to a 'performance-based' service model. The eventual aim is to allow retail customers more flexibility in choosing their suppliers and to improve the quality of services. This in turn has unleashed competitive forces across nations, resulting in reduced margins for the incumbents who had the lion's share of the market just a couple of years prior.

4. Increasing digitization

Digital technologies are transforming operations and increasingly becoming a source of competitive advantage. Energy generation is being restructured through the use of decentralized networks of intelligent, agile and self-serve units to ramp up, balance and diagnose demand. Intelligent automation using the Internet of Things (IoT), Artificial Intelligence (AI) and Robotic Process Automation (RPA) will increase the efficiencies for demand responsiveness and optimize costs.

5. Self-sustaining communities

Self-generation is increasingly becoming an emerging trend, and self-sustaining communities are slowly but surely becoming a reality. This is an area which has been supported by declining costs of generation and storage, and traction is primarily being driven by communities which want to go 'off-grid' and be completely autonomous in their decision-making concerning energy usage. This is another trend that traditional utilities need to contend with, as the size of their target market will begin to decline as the trend progresses.

Adapting to and being compliant with these trends is a challenge - as the ability of incumbents to be agile at scale is still lacking. Most incumbents are using outdated legacy systems which are not truly digital end-to-end. The onus falls on senior executives (mainly CIOs) to get together and plan their future in a way which is adaptable, agile and low-cost.

Rising costs are another huge factor, and we have come across several companies that have not been able to control and invest out of a high TCO (Total Cost of Ownership).

How can powercloud help customers to transform?

“We are taking care of the whole Product-to-Cash value chain incl. billing, regulatory processes, product management, meter data management as well as debt collection and accounting.”

Steven Dawson, VP Sales, North America

Core features are:

1. A utility-core machine room

Manages billing and regulatory processes in a safe, reliable and scalable way.
Covers over 8 million contracts and had only seven minutes of downtime in 2018.
Another 20 million contracts are being migrated today.

2. Low Cost-to-Serve and Cost-to-Acquire

Cost-to-Serve of €10 or less, which has been proven in live customer deployments.
Completely powered by lean and automated processes. Cost-to-Acquire can also significantly decrease by launching new digital channels and tailoring offerings specifically to customer groups.

3. Open architecture and open source

Dependencies on legacy suppliers and technologies are a thing of the past with powercloud. The integrated event-system and the web service gateway allows for a seamless integration of legacy and special-purpose system.

The combined provision includes a range of options for suppliers to consider when transforming, taking both incremental and disruptive innovation steps. This supports the ability to protect against initial industry disruption in the short term, whilst also looking at longer-term strategies for the market as smart interactions move towards centralized, cloud-based services for industry processes.

Chapter 3

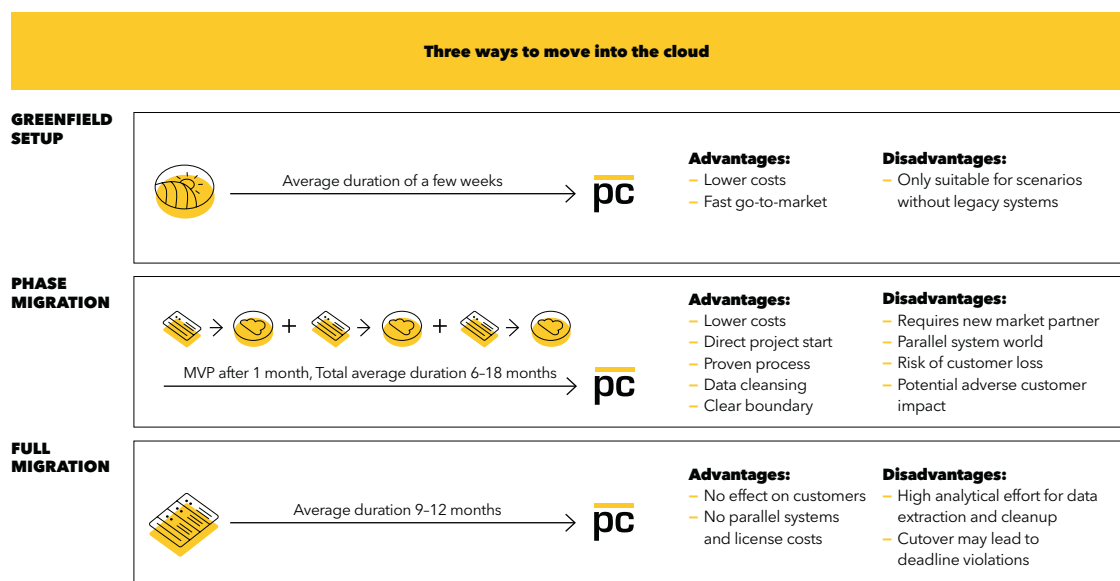
What kind of benefits can customers expect to generate?

The key indicator of success for any initiative are the benefits generated for customers.

This is where powercloud has substantial advantages over legacy technology providers. In the following sections, we discuss certain sources of great benefits, which are backed by real metrics that powercloud have succeed in driving for customers.

1. Minimal migration risk

powercloud lets utilities move customer operations fully to the cloud with lower risk seamlessly and without disruption to existing systems. Depending on the client's requirements and existing systems, a migration approach with lowest risk can be chosen. Utility providers do not need to 'rip and replace' existing systems and can choose to retain certain systems if need be. powercloud offers three core ways to move customers into the cloud and is supported closely by Salesforce Industries, which is also 100% cloud-native and has a proven history of integrating seamlessly with other third-party software providers.



2. Short Time-to-Market

Out-of-the-box capabilities help utilities to achieve a shorter time to market across multiple parameters. At powercloud, products can be billed immediately and can therefore be adjusted within a few minutes - enabling quick reactions to market changes:

1. Company-wide pricing service:

Distributes the same offers across all systems, channels and partners with minimal effort and without the need for manual intervention.

2. Competitive pricing-based targeting:

Calculations can take into account competitors' pricing, enabling them to position themselves at the correct point within the market in order to win over the customers they are targeting. Target groups can be defined and focused.

3. Faster new offer launches

powercloud also enables faster new offer launches. This is essentially a configuration-based approach which helps customers define, bundle and price products faster, thus helping to beat the competition and go to market with innovative product and bundles earlier.

4. Future Ready





























Unlike legacy vendors that have had multiple iterations of their current utility-focused billing offerings, powercloud has been built from the ground up on a cloud-native basis, follows a class-leading upgrade cycle and minimizes any kind of custom building post deployment. The low-code approach also enables agility and improves responsiveness to increasingly dynamic and changing market conditions.

Innovation is another key theme. Here powercloud has been making significant investments on its platform over the last couple of years.

5. Proven Transformation At Scale

powercloud is currently serving leading utilities globally across a number of use cases. Much more to come in the near future.

powercloud customers bill more than \$22 billion of revenue a year within the scope of more than 25 million contracts.

Customers					
					
					
					
					
					

Chapter 4

Steven Dawson talks to Marco Beicht

Steven Dawson, Vice President of Sales at powercloud North America, talks to powercloud Founder and CEO Marco Beicht.



Marco Beicht is revolutionizing the energy industry

Hi Marco! How do you feel about powercloud in 2021?

Well, next year we'll have our 10th anniversary. It's just amazing to reflect how things evolved during the last years and how we became the fastest growing SaaS in the energy industry. You know, no one gets up in the morning and says, "I'm developing a billing platform for utilities that will disrupt a whole industry".

Our readers would love to get to know you better, Marco.

I was born in Achern in the beautiful Black Forest region and I'm the founder and CEO of powercloud. Immediately after graduating from high school, with a starting capital of 25,000 euros that I had received from my father. I developed the e-commerce software company Intellishop, which works for companies such as T-Mobile.

This also laid the foundation for the path into the energy industry with the founding of powercloud. With its platform of the same name, powercloud GmbH has been offering an open SaaS solution for the energy industry since 2012. Our headquarters are temporary in Offenburg while I still live with my family in Achern.

What do you personally like or dislike?

Courage is certainly a characteristic that aptly fits me. And I am very much driven by efficiency and always have the end customer in mind, for whom we develop the powercloud functionalities. I have a hard time dealing with delayed deadlines. I love the region where I live and work and try to be active as often as possible, I ride my mountain bike in the beautiful Black Forest mountains, skate and surf. I got some sort of fame as "the dude in the yellow t-shirt".

What is powercloud in your opinion?

We take outdated, monolithic software systems and replace them with the latest cloud technology - as a modern ERP system for the energy industry. It promotes the development of innovative energy brands and green offers and it also makes utilities ready, relevant and agile for customers and markets alike. We are currently the market leader in Germany with more than 200 customers. Since this year, we have been gearing our internationalization strategy towards new markets, partners and customers.

Today, Marco, utilities are facing great challenges. The growing deregulation of markets will also increase the pressure on innovation and efficiency there, thus generating a large demand for powercloud's solutions, right?

Companies have been obliged to continue adapting to new regulatory and market conditions since market liberalization began. The age of on-site software systems is coming to an end in many areas of application. In the energy sector, the issue is particularly urgent, because many utilities' outdated IT systems are nearing the end of their support or are rather unwieldy 'IT stacks'. So we take legacy IT and replace it with the latest cloud technology.

And the customers are moving, too.

Exactly. They are transforming as well, and we now talk about "prosumers" instead of consumers. The energy customer has traditionally been regarded as a metering point and the technical measuring equipment was given priority - as a consumer that was supplied with a certain quantity of electricity or gas in return for payment. This view is no longer viable in times of increasing individualization and personalization. The expectations and behavior of energy customers have changed, and so established utility companies are reinventing themselves or creating new offers.

But why are those factors so urgent for utilities to act on?

For many utilities this leads to customer churn, increased price wars and ultimately to falling margins. For the established utilities, it's time to act right now, because numerous innovative start-ups are springing up, defying established companies and gaining ever more market shares in the energy sector.

Short scene change: It upsets me when my energy supplier sends me incorrect bills!

powercloud's principle is to identify errors early-on in the process, helping to avoid complex manual interventions and corrections. Ultimately, this not only reduces costs but also promotes satisfaction among energy customers. And then, regulatory obligations are a major pain point across all utilities in many countries, consuming a lot of money and resources. Our system maps regulatory business processes and market communication in accordance with the law, offering a highly automated process - and we deliver format updates free of charge.

You need to have a great team to manage all this...

More than 200 wonderful energy revolutionists, mainly in Germany, but also more and more internationally. We continue to expand our highly energized, innovative environment for outstanding talent - growing together as a team nurturing individual creativity and the desire to grow - unified in driving our common vision to revolutionize sustainable energy for the world we live in. Our fantastic team unites the best software developers, energy experts, consultants and supporters from other functions. We can be very proud of what we achieved: As the rising star of the energy industry, we are on our way to be successful world-wide. We want to grow to 500 employees - applications are always welcome!

Experts agree that the consequences of the pandemic will fundamentally alter our society and our economy. The overall situation is also creating cost pressures at utilities as their profit margins shrink. The cost-cutting program recently announced by multinational electricity and supply company EDF, for example, confirms this assessment. What possibilities does a SaaS solution like powercloud offer in this context?

powercloud modernizes the IT landscape of utilities and helps to create new skills in order to reduce Cost-to-Acquire, Cost-to-Serve, Time-to-Market and customer churn. In parallel, powercloud offers new sources of revenue by giving the utilities the opportunity to create new energy products and services. With powercloud, utilities are perfectly equipped to handle growing cost pressures in coming years also due to our transparent, simple and open licensing model.

Keyword energy megatrend decentralization: decentralized energy generation, battery storage and much more is on the rise.

The energy market of the future will be shaped by decentralized energy generators such as privately operated photovoltaic systems or municipal wind farms. As a result, the energy management system has become much more complex, highlighting the urgent need for new regulatory standards. A growing number of companies are now also offering attractive products aimed at private individuals with a view to selling self-generated energy profitably through the direct marketing system. And powercloud provides the regulatory environment for this purpose, underpinning decentralized energy supply, CO₂ efficiency and further development of renewable energies.

As an entrepreneur, you bear responsibility for employees, customers, partners, society and the environment. How do you deal with this?

powercloud is 'the' digital utilities' backbone facilitating innovative change and underpinning de-centralization and the green energy revolution. Allowing utilities to fully cater to their customers' needs while supporting the reduction of our planet's CO₂ footprint. It is our firm belief that companies like powercloud are helping to drive a truly sustainable future for our world.

powercloud enables utilities to realize the energy transition away from fossil fuels to renewable energies, correct?

This is very important to us! New products and services are emerging - the days when utilities only offered electricity and gas are over. Instead, wallboxes, solar panels or cell phone contracts, for example, are also sold via personalized portals using cross- and up-selling.

E-Mobility is becoming a huge topic these days. In 2019, almost every second car sold in Norway was an electric car, for example. powercloud is also shareholder of the e-mobility solution provider chargecloud. chargecloud offers a cloud-based software solution in the area of back-end development that bundles all e-mobility processes into one platform. There are more and more electric cars on the road - but what happens when everyone comes home at half past five and plugs in their charging cables? The big blackout. We have to work to prevent this scenario.

And your engagement doesn't stop here. What is currently happening in your hometown Achern?

With our new headquarter - the IT Campus Achern - we expect to meet the highest ecological standards in 2023. All essential aspects of sustainable, environmentally-friendly construction are being taken into account. The construction area is to be developed in an almost CO₂-neutral manner and the two underground parking garages will accommodate parking spaces and bicycle parking spaces, including e-charging stations, while the campus will be car-free above ground.

Chapter 5

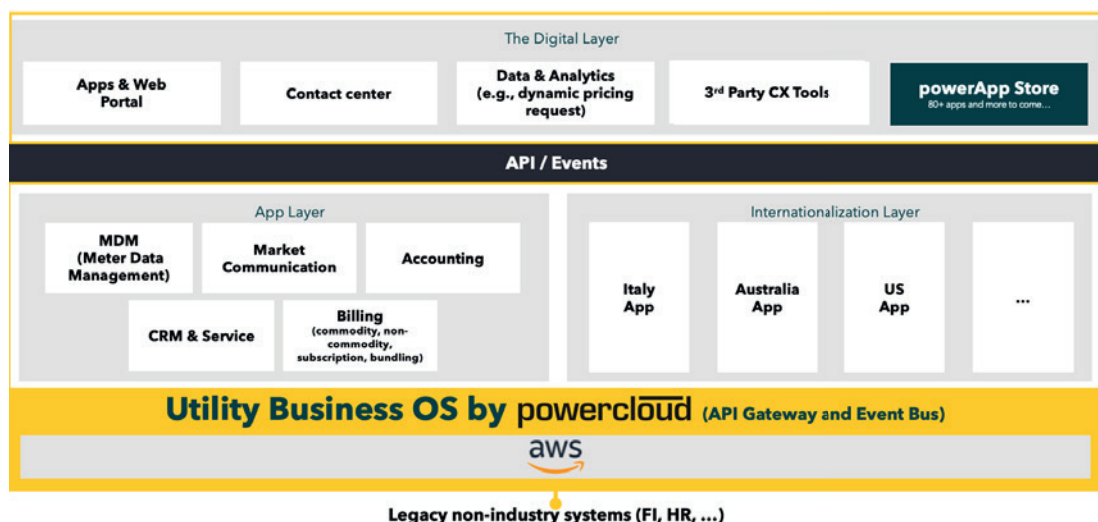
Conclusion

We hope that you found this executive briefing valuable, and that our areas of focus and recommendation resonate with your current priorities.

powercloud plays a central role in our customers' digital transformation initiatives, enabling global energy & utilities organisations to rapidly execute their vision, experience near-term success, and build incremental value over time.

Our transformation leaders engage beyond the deployment of technology to help develop digital skills, create agile cultures and enable rapid time-to-market. We would value the opportunity to learn about your digital transformation priorities.

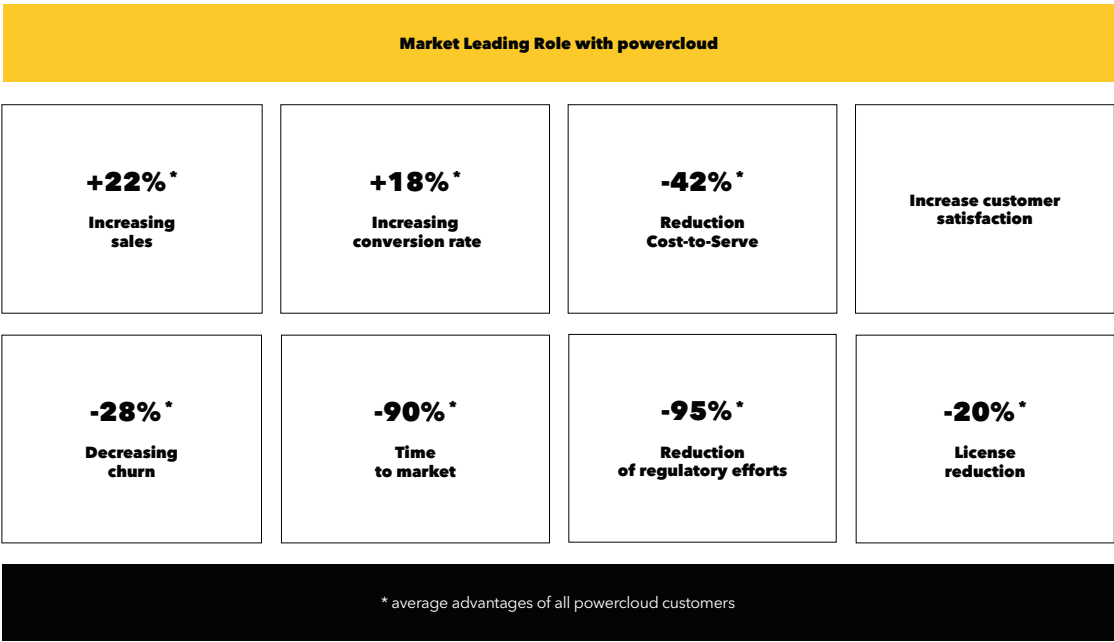
We believe that unlocking customer-centric innovation through agile, industry-specific digital capabilities will help you grow your base, retain loyal customers, generate more operational efficiencies and be ready to face any and all emerging challenges that the future brings.



About powercloud

With its platform of the same name, powercloud GmbH has been offering an open SaaS solution for the energy industry since 2012. With more than 200 customers, it is currently the market leader in Germany.

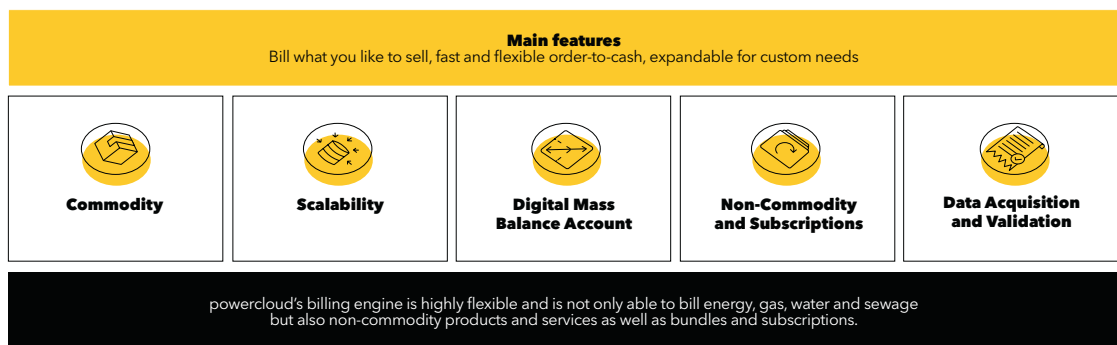
Today, powercloud manages around eight million contractual relationships, while processing around six billion euros in sales. A further 20 million contracts are currently undergoing migration. As the fastest-growing CRM and billing system in the industry, powercloud facilitates the development of innovative energy utility brands and green energy products, and helps existing suppliers, grid and metering point operators (soon), as well as municipal utilities to get ready for the IT and customer requirements of tomorrow. Alongside EnBW, E.ON, EWE and Yello, powercloud’s customers include a large number of municipal utilities and independent energy providers.



Expanded view on page 21

Business power	Technical and automation power
3 minutes for a relocation process	Zero code change due to our outstanding event break concept
3 clicks, 2 minutes to change bank data or correct an invoice	Shareconomy If one customer implements a requirement, all users benefit
2 days max. to create and introduce new bundled offers	powerApp store Plug & play capabilities enable new business models
2 hours to introduce a new product	Full SaaS 340 micro updates per month, zero disruption to service
80% Reduction in TCO compared to legacy incumbents - Cost-to-Serve	Scale & speed 10 million invoices generated in 16.5 hours - 20 million customers on the platform
5 to 15 Euros Cost-to-Serve	Availability 99.95%, continuous monitoring & predictive maintenance
0 Euros for regulatory and legal changes	Open source 100% cloud-native - no vendor lock in
	Event driven e.g. billing monitoring & digital channel re-issue

Billing engine



Expanded view on page 22

Chapter 6

Voice of the customers

“powercloud played an important role in our transformation towards customer- centricity and operational excellence - especially with regard to service availability, service quality and cost. Furthermore, our product innovation is becoming quicker and more effective, building on simplified and streamlined processes.”

Karsten Wildberger,
Member of the Board of Management of E.ON SE

“Our world is becoming increasingly digital and with it the behavior of our customers. By converting our entire IT architecture, we will become one of the leading digital providers in the competitive arena. Fast time-to-market times, individual product solutions and efficient interaction guarantee an attractive customer experience. Data-based sales is the basis for achieving our economic goals. Digitization not only makes us cost-efficient – it also enables sustainable competition.”

Dr. Frank Mastiaux,
Chairman of the Board of Management of EnBW Energie Baden-Württemberg AG / CEO

“powercloud is an important part of our IT digitization strategy and provides us with a modern and flexible cloud platform to offer our customers the best possible service. The first migration wave has shown us that in choosing to go with the powercloud platform, we’ve made the right decision.”

Jens Kallrath,
Head of Business IT Customer Solutions, E.ON Energie Deutschland

“As a modern company, we face the challenge of continuously developing processes to bring services together both internally and externally in a way that is both automated and networked. In the past, we relied on a legacy IT system whose architecture is no longer being developed by the provider. In addition, the level of automation was low, and we were forced to use workarounds. Modern tariffs, bundled products and a holistic view of the customer were extremely difficult to achieve. It was therefore essential to establish a modern and flexible billing platform.”

Markus Schümann,
Managing Director, Uelzen municipal utilities

“We need fully digitized and automated processes in the background if we want to pass on green electricity to our customers via an app without a profit margin. With its open technology and digital mindset, the powercloud platform offers us the basic technological prerequisite for our business model.”

Mario Weißensteiner,
CEO, homee GmbH

“Establishing a direct connection to digital meter systems, e-mobility solutions and existing inventory systems - these requirements can be implemented with powercloud’s open interfaces. The platform will thus play a central role in our IT architecture going forward.”

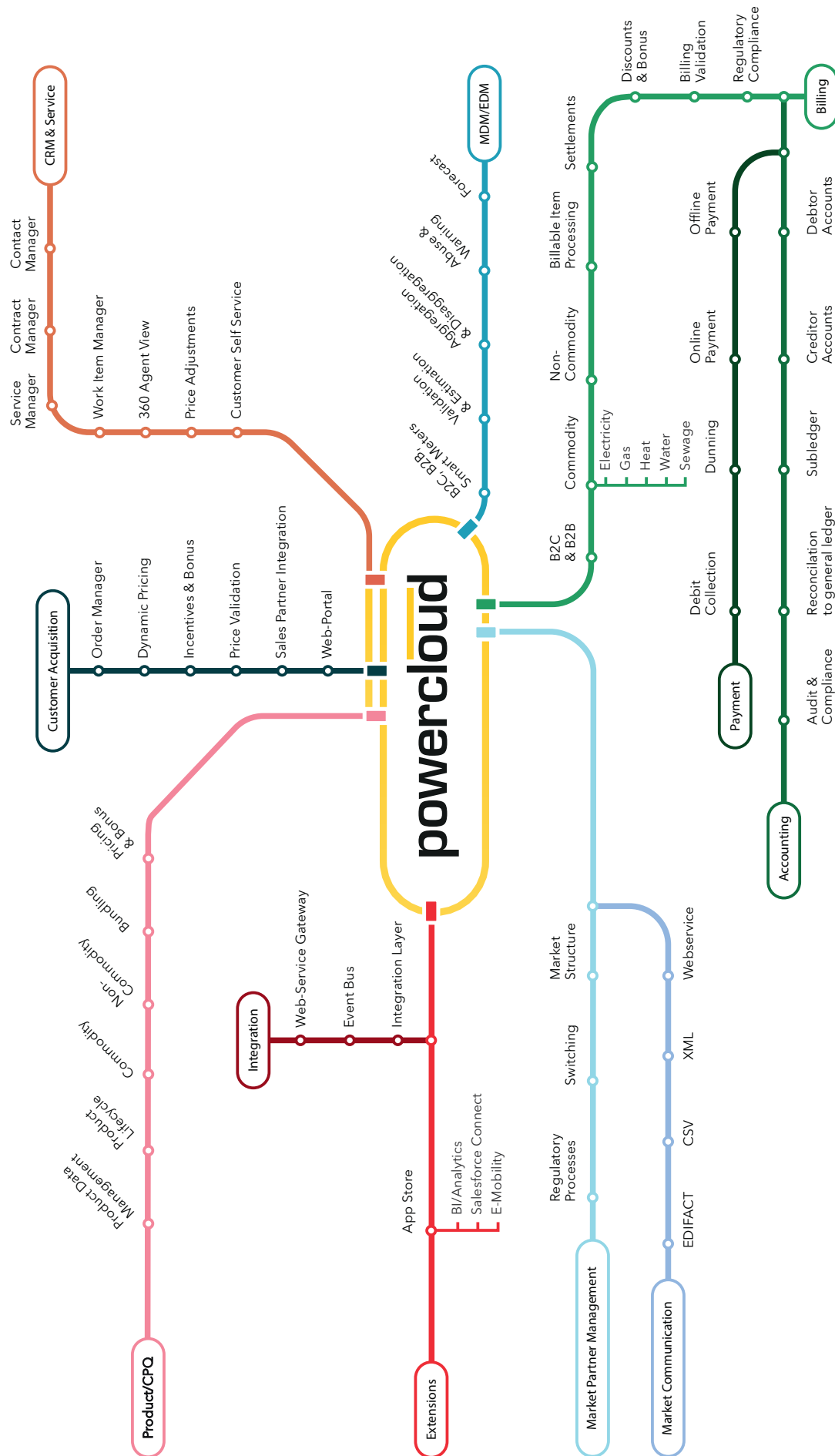
Boris Käser
Board member at e.optimum

“We are impressed with the powercloud solution. In future we will be able to offer new products even faster, accelerate innovative, customer-oriented processes and at the same time press ahead with the digital transformation of the entire company.”

Dr. Frank Brinkmann
CEO of SachsenEnergie

Chapter 7

Infographics in expanded view



Modular powercloud Structure

Market Leading Role with powercloud

+22% *

Increasing sales

New innovative products will lead to an increase of sales

+18% *

Increasing conversion rate

If the customer finds products that address their needs the CR increases

-42% *

Reduction Cost-to-Serve

Reduction of complexity with lean processes, automation, digital channels and standardisation of IT

Increase customer satisfaction

Increased customer satisfaction due to a higher service level through access to digital channels

-28% *

Decreasing churn

Offering products to existing customers based on their needs

-90% *

Time to market

Launch of new products and functionalities within days instead of weeks

-95% *

Reduction of regulatory efforts

All regulatory updates out of the box as part of the SaaS model

-20% *

License reduction

Competitive pricing scheme with mgt, infrastructure incl. due to the SaaS model

* average advantages of all powercloud customers

About powercloud, more information on page 15

Main features

Bill what you like to sell, fast and flexible order-to-cash, expandable for custom needs



Commodity

Automated complex calculations of billable. Scalable high performance edm, forecast and settlement processes.



Scalability

Having all contracts in a central location delivers an holistic view of the customer relationship and forms the basis for value-oriented development of the customer (margin increase and churn reduction).



Digital Mass Balance Account

Events and open web service interfaces enable customer self-service on all channels including live status tracking. Digital and interactive customer journeys at its best.



Non-Commodity and Subscriptions

Billing of non commodity items such as hardware services as one time offers, bundles and subscriptions. Also add-ons and options are possible with additional costs.



Data Acquisition and Validation

Automated plausibility-checks of received meter readings and other market and energy data. Acquisition of measured non-commodity billing records and measurement values.

powercloud's billing engine is highly flexible and is not only able to bill energy, gas, water and sewage but also non-commodity products and services as well as bundles and subscriptions.

— Billing engine, more information on page 16



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