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WHITE PAPER

ENABLING THE EQUIPMENT AS-A-SERVICE MODEL.

INSURANCE AND FINANCING STRATEGIES

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1. EXECUTIVE SUMMARY

Equipment-as-a-Service (EaaS) is a subscription business model, in which equipment is provided for a fee that also bundles maintenance, spare parts, installation, and other value-added services together. By moving towards providing a service, industrial companies can create a stable and resilient recurring revenue base, ensure better outcomes for their end-customers, and capture more of the lifetime value chain through value-added services.

Although Equipment-as-a-Service offers numerous benefits, business model transformation is still seen as a risky endeavor by industrial businesses. When it comes to risk, adopting a new business model goes through the following stages: identifying potential risks, getting comfortable with them, and eventually turning these risks into strengths. There is another appealing aspect of embracing innovative models - competitors on the market are still risk-averse, which generates additional advantages for those who start early.

By managing risks rather than avoiding them, industrial companies can get ahead of the competition and build a resilient business model based on the power of recurring revenue. Businesses need a strong partner to ensure the success of such a transition. That's why tailor-made financing and insurance solutions combined with first-class IoT technology and its delivery play a significant role in building a future-proof Equipment-as-a-Service model that is scalable.



2. INTRODUCTION

The emergence of Industry 4.0 and the adoption of the Internet of Things (IoT) impact every economic sector – from manufacturing to healthcare, from mining to retailers. This is especially true for businesses in legacy industries that need to embark on a business transformation journey to stay relevant.

Although new business models are becoming more and more popular, it is still challenging to secure their financing and de-risk digital transformation. That's why industrial companies need a new perspective on how to finance and insure new business models in manufacturing.

The shift to innovative models is of critical importance for the manufacturing industry, and it is essential to ensure that industrial companies undergo business model transformation with a guarantee for success.

Without adept financing, the transformation initiatives cannot bear fruit since there is a limited chance for scaling. These efforts are doomed from the very beginning because of their limited character and inability to bring concrete results. A new approach towards insurance and financing based on IoT capabilities in the manufacturing space is beneficial for everyone – OEMs, servicers, operators, and end-users.



3. THE RISE OF THE EQUIPMENT-AS-A-SERVICE MODEL

We have reached the next stop on the ongoing journey of change in manufacturing. Consumer-facing manufacturers are already shifting to an Equipment-as-a-Service model to build more resilient revenue models as well as create more powerful hardware and software service bundles. The increased competition and product commoditization make manufacturers explore new strategies to stay relevant. The service-based business model ensures recurring revenue and the ability to get to know the customers' needs to a greater extent. This increases customer satisfaction and leads to cross-selling and easier equipment upgrades.

Equipment-as-a-Service (EaaS) describes a process in which production systems or machinery are not purchased but provided by the manufacturer for a recurring fee. The responsibility for maintenance, service, repairs, and replacement remains with the EaaS provider. In comparison to the classic leasing model without data intelligence, EaaS is more suitable for today's customer demands as it provides a service that includes a guaranteed availability of the assets. Therefore, the customer enjoys greater flexibility and better service.

By harnessing the power of Industrial IoT, companies can increase revenues and achieve business outcomes. That's why converging to IoT has become increasingly relevant for industrial manufacturing, oil and gas, automotive, energy, heavy equipment, and mining industries.

By bundling hardware, software, and services into one solution, industrial companies can fully benefit from reliable data and insights. The EaaS business model also addresses the evolving customer expectations by providing improved maintenance. The Industrial Internet of Things is the engine behind the model - ensuring equipment uptime and reliability.

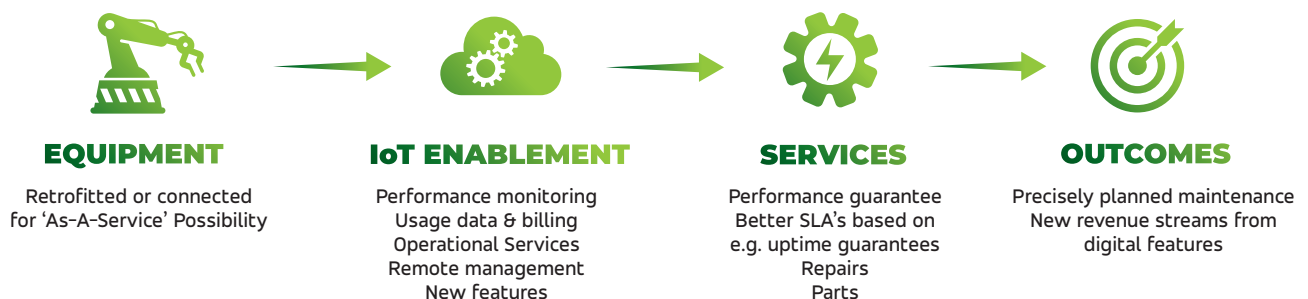


Although the service model became popular with the emergence of Industry 4.0, the concept is not new. The term 'Power-by-the-Hour' was invented by Rolls-Royce back in 1962 when the company started offering an engine replacement service based on cost per flying hour. Thus the operator was only paying for the well-performing engines. Rolls-Royce expanded the service by minimizing downtime and making maintenance costs predictable.

Nowadays, more than ever, there is a strong need to create value beyond products. Industrial customers are looking for complete solutions rather than individual products. Therefore, offering services such as maintenance and repair provides opportunities for growth and higher profit margins. Value-added services such as predictive maintenance eliminate repair costs and increase customer satisfaction.

THE BENEFITS OF THE EAAS MODEL

NEW REVENUE STREAMS FROM DIGITAL FEATURES



By moving from selling products to selling performance through the EaaS model, industrial companies can not only build digital capabilities but also become an integral part of their customers' processes. Why is this a game-changer? Shifting from the limitations of the capital expenditure model (CAPEX) to the flexible operating expenditure model (OPEX), manufacturers can provide service and attract a broader customer base. In sharp contrast to capital expenditures, the OPEX model offers the possibility to receive recurring revenue through the whole duration of the equipment's life cycle. There is no substantial upfront investment in equipment, and the model allows for greater flexibility for the end-customer. Thus industrial businesses can ensure better outcomes for their end-customers, capture more of the lifetime value chain through value-added services, and create a stable recurring revenue base.

4. DIGITAL TRANSFORMATION OF BUSINESS MODELS

As Equipment-as-a-Service models gain critical mass in manufacturing, there is no doubt that digital transformation becomes a stepping stone to success. The power of technology is immense, and that's why industrial businesses are looking for ways to utilize it. According to a PwC report, Artificial Intelligence, for example, could contribute up to \$15.7 trillion to the global economy in 2030, more than the current output of China and India combined. The numbers show that \$6.6 trillion result from increased productivity and \$9.1 trillion could come from consumption-side effects.

There is a catch, though: When adopting digital technologies, the company's business strategy is often on the sidelines as the focus shifts to finding the best technological solution. In other words, the business should drive the technology and not vice versa.

Unlocking the value of digital in manufacturing has been centered around disruptive technology and tools rather than business outcomes. Technology cannot provide value if there is no deeper understanding of how and why to use it. Even in the cases when the companies know how to use technology, they are hesitant since they realize it brings a shift in mindset and changes the whole company.

According to research by McKinsey, many organizations embark on a digital manufacturing journey that cannot create enough value to justify its cost. Less than 30% of the companies participating in the McKinsey Digital Manufacturing Global Expert Survey had achieved a broader roll-out of their solutions after the pilot phase.

The transition to the EaaS model affects the entire organization - shaping the entire value creation chain of planning, research, development, manufacturing, marketing, sales, and services. That's why it is essential to create a bulletproof strategy to reap the benefits and avoid financial risks. Here are some possible approaches:

- Establish digital transformation as a CEO-driven agenda
- Carry out a careful risk assessment
- Calculate customer-specific price points based on a realistic analysis of the life cycle costs
- Draw up contracts that take your customers' specific situations into account
- Think big - external capital can help your organization focus on transforming the entire business model instead of focusing on single initiatives and pilot programs.



(A) - RISK AS A PERFORMANCE ENABLER

In times of rapid change, businesses can turn digital disruption into a strategic advantage. It is critical to rethink the traditional business models and shift the company's strategy to new ways of capturing value. Although pay-per-use models open new possibilities, the majority of manufacturers have been risk-averse because of the uncertainty that comes with business model transformation. According to a 2020 executive survey, conducted by relayr among 200 leaders in the U.S. and German manufacturing industries, a complete business model overhaul was an option for only a few of the surveyed companies: 16% of U.S. companies are planning a business transformation and only 8% of the German businesses.

However, a majority of those surveyed recognize that Equipment-as-a-Service represents an advantage for both the supply and demand sides.

In the U.S., 34% said pay-per-use models represent a big or a very big advantage, while 29% consider it a slight advantage. Almost half of the companies surveyed also stated that they use a pay-per-use model themselves (18%), offer it (15%), or do both (9%).

These numbers confirm that transforming a business model brings numerous benefits, but it is still perceived as a risky endeavor by the majority of industrial businesses.

Risk in business is usually seen as something that needs to be eliminated, a complication that hinders the efforts of the company towards delivering products or services. There is another point of view that reflects the history of innovation - the economist Robert Merton, mentioned by Harvard Business Review, argues that companies create value by managing risk better than their competitors. The result is that if you are better at managing a particular risk than the others on the market, you can gain a competitive edge.

It is essential to review the sources of risk for the business model and act accordingly. Thus redesigning the business model can be ideal for reducing risk as well as open new opportunities for tapping unseen potential by actually adding risk. According to Harvard Business Review: **Often companies that have lowered their business model risk have done so by delaying production commitments, transferring risk to other parties, or improving the quality of their information.**



(B) - HOW TO TURN RISK INTO OPPORTUNITY

Nowadays, the hardware still accounts for a higher percentage of manufacturing companies' value than services and software. With the emergence of Industry 4.0, equipment prices are dropping while services are becoming more valuable. Industrial companies can capture value by increasing machine integration with digitally-enabled services. The biggest challenge is how to focus on long-term results and finance the transformation journey while ensuring business outcomes.

These are the benefits of insuring business outcomes at a glance:



Mitigate risk in investing in an IoT project



Offer services, either new services or added-value ones like performance guarantees



Insure higher uptimes and offer better services for the customer

A global survey conducted by Oliver Wyman among industrial firms assessed the challenges faced by organizations in implementing digital technologies.

The top concerns were the following:

- Difficulty to justify ROI
- Lack of financial resources
- Inability to upgrade old equipment that is difficult to connect
- Lack of digital competence in key areas

The answer to these challenges is gaining access to financing that allows the company to think big, get rid of unnecessary limitations, and act from a position of strength. The business model transformation, something considered unaffordable before, becomes a reality with the help of external capital. There is an extra gain – speed to market and time efficiency – since pilot programs that never scale can be avoided. By adopting the EaaS model, a shift from CAPEX (capital expenditures) to OPEX (operating expenses) takes place. The OPEX business model eliminates costs, increases revenue streams, and provides greater cost transparency.

Another critical factor is finding the right partner to mitigate or insure against the risk of failure. Risk minimization enables organizations to rethink their business models and future-proof their business. Identifying potential risks, getting comfortable with them, and finally turning those risks into opportunities is the formula for gaining a competitive edge.

(C) - THE FINANCIAL CHALLENGES FACING INDUSTRIAL OEMs

A Siemens report on Industry 4.0 quotes a Spanish machine manufacturer that points out one of the biggest challenges for industrial OEMs.

“Upgrading our production environment is extremely reliant on the payment method we can obtain. Each phase might cost around €1 million, and we quickly recover those costs, but until that point, there’s a real impact on cash flow. Traditional financiers do not provide appropriate mechanisms for this kind of project as they do not understand how our operations function.”

For small and medium-sized manufacturers, investments in complex and highly specialized equipment or complete production systems represent a significant financial risk. In a globalized market with ever-faster technical development, it is necessary to be able to produce at the cutting edge to fulfill customers' increasing expectations.

The costs of this investment affect liquidity, restrict financial flexibility and are transferred to the customers. Thus the OEM's competitiveness is put to the test with no actual ROI guarantee. Once the equipment has been procured, its cost must amortize over many years. And what about machines that are not in operation? They cost even more to the manufacturer and eventually end up as dead capital.

There are also other possible scenarios - a machine-break-down leads to repair costs, production downtime, and possible delays in delivery. The EaaS business model, combined with the Industrial IoT, offers a reliable solution to solving these challenges. The EaaS offering can be enabled by a variety of flexible financing models. The traditional leasing plus is certainly the most straightforward one. This innovative leasing concept bundles together the service and software components as well as allows for flexible payment options. Thus production equipment remains state of the art, and there is security in financial planning. Since even this innovative leasing model might not fit all customer needs, there are other alternatives - tailor-made solutions - depending on the requirements.



5. INSURANCE AND FINANCING - PARTNERING FOR SUCCESS

As business model transformation requires a focus on risk mitigation, building partnerships become crucial for success. Let's take an example to illustrate that - a mid-sized European CNC machine manufacturer. CNC machines are widely used to produce high precision metal parts for various industries around the globe. The company faces growing competition and looks for ways to adapt to the new challenges posed by digitization and changing customer expectations. It is exploring progressive business models that create new revenue streams and enable expansion to new markets.

These points are of immense importance for the manufacturer:

- How to stay relevant when competitors are offering similar products at a lower price?
- Which business model fits the needs of the company and its customers?
- What is the right approach when it comes to digital transformation?

By identifying EaaS as the right choice, the CNC machine manufacturer is only at the beginning of its transformation efforts. There are other details to consider, such as ensuring risk minimization and profitability in the long run.

When enabling a shift to an EaaS model, the traditional financing and insurance approach usually come short of expectations. As a partner, we are looking for ways to not only ensure the smooth transition to a pay-per-use model but also guarantee machine performance and uptime availability. There are several risks associated with that - service risks, utilization risks, machine availability, equipment breakdowns, etc.



That's why strong partnerships are crucial for the success of transforming business models. Finding an expert partner solves the following challenges:

- The risk of embarking on a business transformation journey is shared with companies that have already successfully guided other manufacturers through the same process.
- The partner has a decisive role in offering tailor-made financing and insurance solutions since traditional financing for EaaS projects is almost non-existent or hard to obtain.
- The CNC machine manufacturer is not an expert in EaaS implementation and requires support for creating its go-to-market strategy and offering. The advisory role in these stages of the transformation process is invaluable for achieving success.
- The manufacturer does not need to reinvent the wheel. Through its partner, the company can gain access to a whole new ecosystem of experts - match their capabilities to its needs and consequently create a strong ecosystem on its own.
- The manufacturer can focus on expanding its core competencies.

ENABLING THE EAAS MODEL

According to the Subscription Economy Index™, IoT and manufacturing subscription companies exceeded their industry S&P 500 benchmarks by more than 5 times with the shift to digital services. The mid-sized CNC machine manufacturer from our previous example has identified this enormous potential and decided to embark on a business transformation journey. There is a critical first step to consider - reaping the benefits of the EaaS model is only possible after building a stable foundation that comes at a price. Thus financing the transition to a subscription model has the biggest initial impact on the manufacturer's operations.

When we talk about the financial side of the business model transformation, investing in new capabilities can be challenging. The so-called 'Fish Model' illustrates the difficulties faced by industrial businesses. It shows that the transition period between setting a new business model and receiving a steady flow of revenue cannot be avoided. The company needs to build capabilities first - a transition from selling assets to selling service-based contracts - and this transformation takes time. It becomes apparent that the costs at the beginning of this process are higher than the revenue since the expenses are still there, but the return comes over time in the form of monthly installments. (Figure 1).



THE TRANSITION FROM A TRADITIONAL MODEL TO A SERVICE MODEL CAN BE A CHALLENGING ONE

THE FISH MODEL

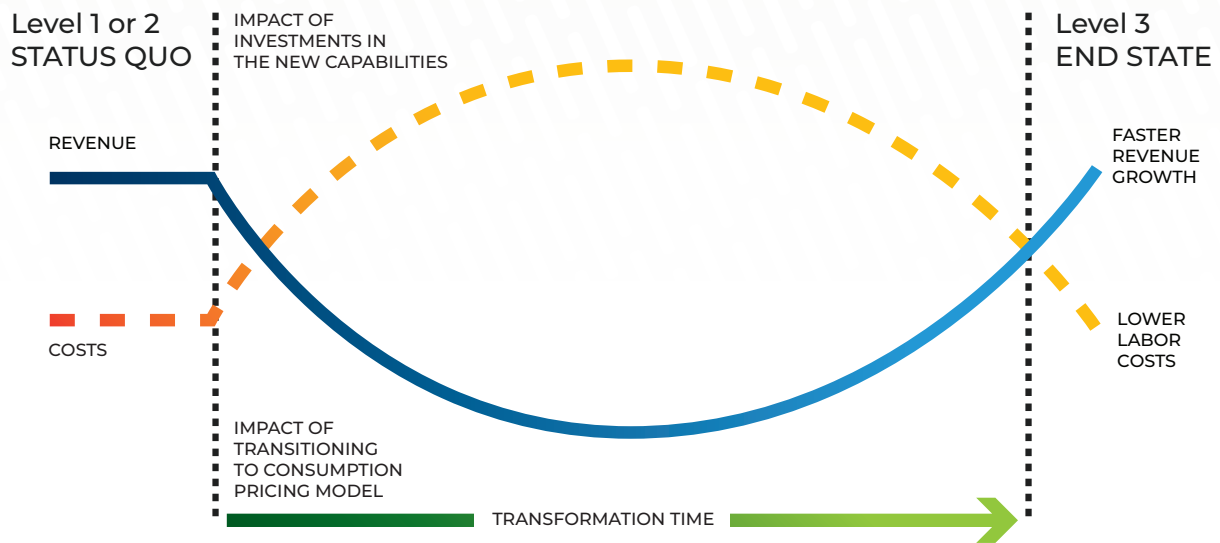


Figure 1. An example of “swallowing the fish” model. Source: Bain & Company 2019.

How does the EaaS financing help in the process of ‘swallowing the fish’? Here is how it works. In the case of the CNC machine manufacturer, the company sells its machines to the financing partner - it receives upfront payment in a way resembling the traditional CAPEX model. The decisive role of the partner is to support the manufacturer in offering its assets ‘as-a-Service’. Thus it can identify upscaling potential through the whole duration of the equipment’s life cycle - a stepping stone for higher revenue. By providing value-added services, the manufacturer creates more touchpoints with its customer, which leads to a deeper relationship and higher customer satisfaction.

Relayr’s ability to orchestrate all necessary insurance and financing partners, provide go-to-market support on the sales and delivery side as well as support customers’ transition to a service-oriented organization can be extremely beneficial to manage the investment cost. Additionally, by harnessing the power of the Industrial IoT, we are mitigating the revenue and cost impact of the shift towards EaaS. We help OEMs ‘swallow’ the transitional cost - moving from a traditional model to the as-a-Service model.

THE ROAD TO SUCCESSFUL BUSINESS MODEL TRANSFORMATION

Companies that are embarking on a business transformation journey could be in for a bumpy ride. Although the Equipment-as-Service model offers stability and business growth in the long run, it requires a significant commitment in its adoption phase. Choosing to go down that road with a partner makes it easier for businesses to bridge the gap. There is only one condition - companies must be willing to share the benefits of the achieved business outcomes.



WITH A PARTNER MODEL



DO IT YOURSELF MODEL



FINISH LINE



There are different financing models for bundling hardware and service together. Leasing represents just one example of the numerous financing opportunities to do that. The standard leasing triangle model (Figure 2) consists of three sides - the manufacturer, the financing partner, and the end customer. On one side of the triangle, there is a flow of service and cash between the manufacturer and the customer. The other side portrays the dynamics between the manufacturer and the financing partner - the manufacturer is selling its assets by transferring the ownership to the financing company. The financing partner is then offering a leasing contract to the end customer, which represents a standard leasing triangle arrangement.

STANDARD LEASING TRIANGLE

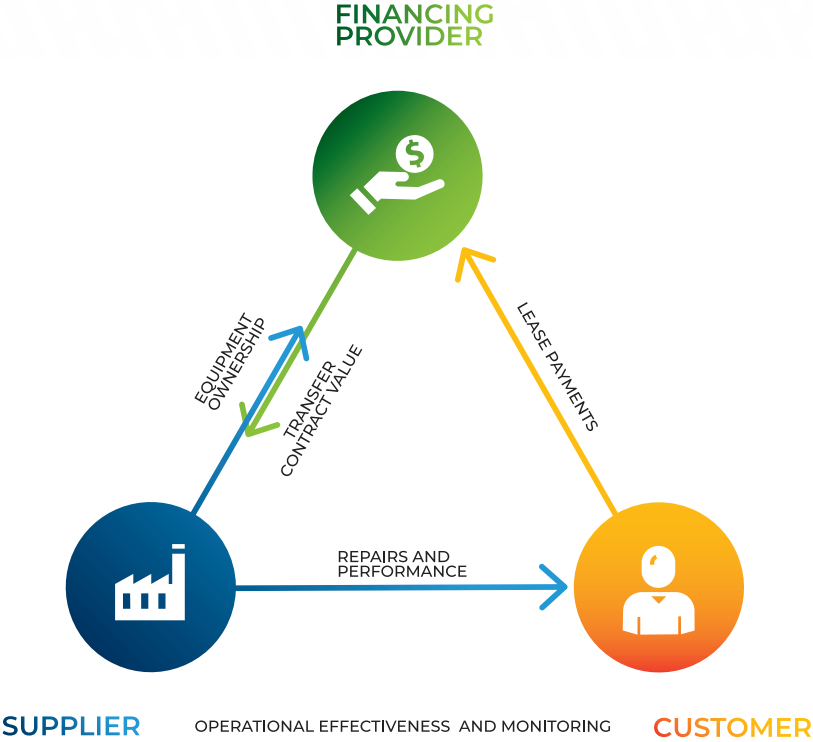


Figure 2. An example of a standard leasing triangle model.

The main benefit of the standard leasing triangle lies in its easy set-up. Additionally, the manufacturer receives an upfront payment for its equipment, and the asset no longer appears on its balance sheet. The manufacturer can access new customer segments since those customers who couldn't afford its high-quality machines can now rent them. There are also numerous advantages for the end customer: machine uptime backed by IIoT-enabled maintenance, low monthly payments, tailor-made pricing, etc.



When it comes to financing transformative IIoT projects, EaaS financing is not only suitable for manufacturers selling new machines as a pay-per-use model. The so-called brownfield approach is also possible in the case of EaaS buy-back financing. The financing partner is buying back equipment and retrofitting it - after that, the manufacturer can offer it as-a-Service. **Because of the unique nature of the EaaS model, there is no one-size-fits-all solution. The role of the strong partner is to guide the manufacturer in finding the financing model that fits its needs best.**

In the case of EaaS financing, relayr, besides other models, also makes use of the leasing plus model as a basis by adding service to it. A third-party provider finances the equipment or production system, makes it available to the end-customer, and ensures that operational and maintenance services for the equipment are in place. This allows the end customer to only pay one invoice. There are two ways to secure that - through a rental lease model or standard lease model plus (Figure 3). When it comes to the CNC manufacturer mentioned before as an example, the end customers do not require an off-balance solution. Therefore, a leasing model plus as the basis for EaaS is a viable way to go.

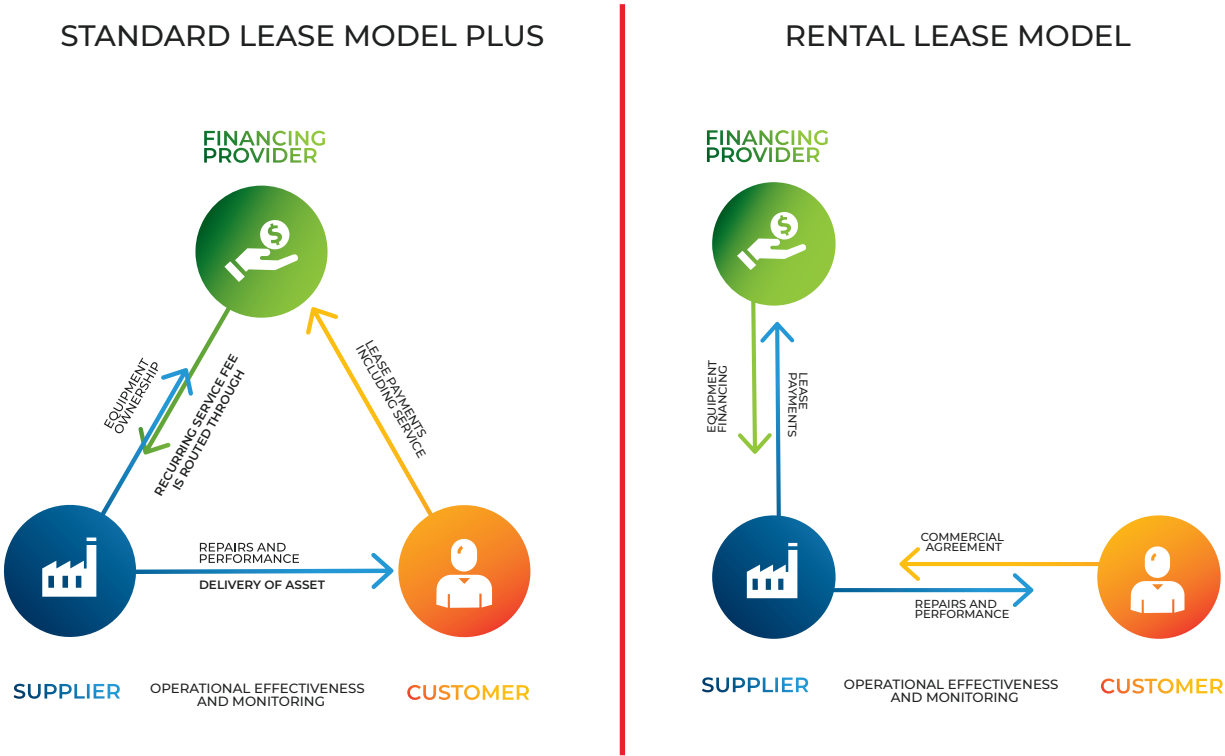


Figure 3. Examples of a standard lease model plus and a rental lease model.

What are the benefits for the manufacturers? Moving away from high capital expenditure (CAPEX) reduces business risks, improves cash flow, and increases productivity due to more reliable systems that are maintained regularly and, when needed, are fixed immediately by the service provider. There are also numerous advantages for the manufacturers - the servitization model multiplies the lifetime value of the equipment and gives suppliers control over the lifetime quality of their products. It stabilizes revenues and captures 'lifecycle revenues'.



Relying on lifetime revenues means that the manufacturer needs to secure the performance of its machines in the long run. In the case of CNC machines, for example, the OEM has to provide higher performance guarantees in comparison to its competitors to reap the benefits of the EaaS model. Insurance is all about managing potential risks in such a way that they become strengths. Relayr offers its partners numerous possibilities through its parent company - one of the world's largest reinsurers Munich Re, including but not limited to

- **Completion warranty**
Making machines smart is the basis for ensuring higher uptime guarantee and outstanding performance. Yet, it is a challenging process that involves deep expertise and careful orchestration. By insuring the delivery of interoperable IIoT solutions, relayr takes that weight off the shoulders of the manufacturer.
- **Retrofit warranty**
The original manufacturer's warranty becomes void in the process of IoT deployment. There are also potential risks when buying back equipment that was at the customer side for retrofitting purposes. The retrofit warranty minimizes the risks for the manufacturer and provides a way to guarantee the performance of older equipment. There are also benefits for service providers - not having to take the extra risk of void warranties and machine failures when retrofitting old machines.
- **Business outcomes warranty**
Business outcomes (for example, operational efficiency gain, maintenance cost reduction, zero-unplanned downtime, etc.) warranty is a unique approach to minimize risks for both manufacturers and end-customers. Relayr not only provides this warranty to its direct partner but also enables the manufacturer to offer it to its customers as well (Figure 4).

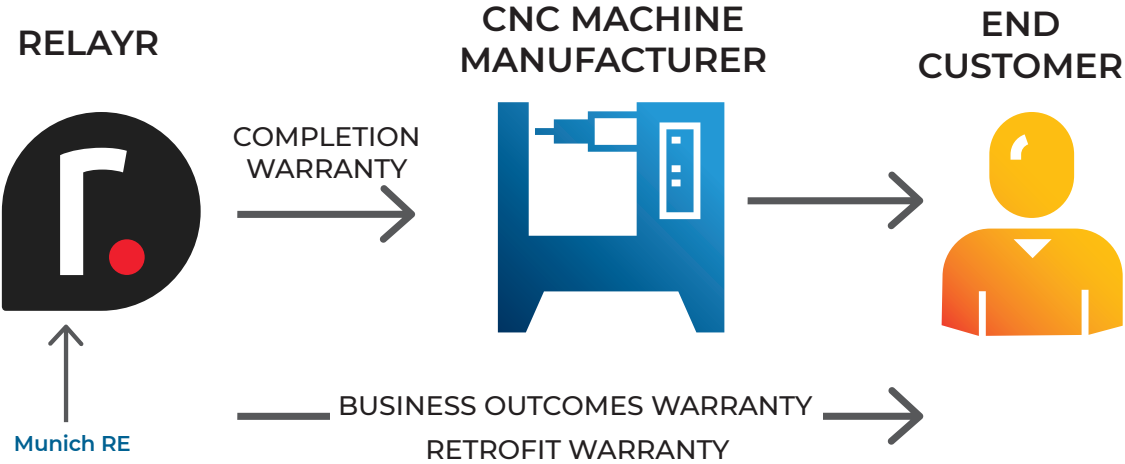


Figure 4. An example of relayr's insurance offering.

When transitioning to an Equipment-as-a-Service business model, industrial companies need to choose a partner that understands the complexity of business transformation. There are no off-the-shelf solutions since industrial businesses differ in size, capabilities, and needs. One is for sure - transforming a business model is a big leap for every company and requires a tailor-made approach.



6. ONE STOP SHOP

As Equipment-as-a-Service models gain critical mass in manufacturing, there is no doubt that digital transformation becomes a stepping stone to success. When adopting digital technologies, the company's business strategy is often on the sidelines as the focus shifts to finding the best technological solution. In other words, the business should drive the technology and not vice versa. Adopting a holistic approach which encompasses business strategy, leadership commitment, talent, and strong partnerships, paves the way for a successful transformation of the entire business model.

Relay is committed to realizing the full potential of IoT in the industrial space and covers all stages of the business transformation journey:



WE DELIVER

the most complete IIoT solutions for risk-free digital transformations.



WE UNLEASH

data insights from existing equipment and production lines to improve business outcomes.



WE ENABLE

a shift from CAPEX to OPEX based offerings by a unique combination of IIoT technology, powerful financial and insurance offerings.



WE EMPOWER

manufacturers, operators, and service companies for industrial equipment to implement fully interoperable IIoT solutions guaranteed to achieve their business outcomes.

7. HOW WE WORK

We understand that our success only comes from your success. That's why we use a collaborative partner approach to help guide you through the challenges of your IIoT journey.



START WITH THE OUTCOME.

The first question we ask is: "What is the business problem we're trying to solve?" followed by "Can we translate this into a new significant business opportunity?". The answer to these questions will guide the entire digital transformation journey.



ONLY WHAT YOU NEED.

Because your business needs and industrial environment are unique, so too will be your IIoT solution. We work with your internal stakeholders to learn about your company's pain points and gain a full understanding of your existing industrial environment.



EXPERT LED IMPLEMENTATION.

Once your IIoT solution is agreed upon, our Professional Services team coordinates with your internal stakeholders, our technology experts and other partners to deliver a successful solution.

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