FEATURE

Scaling XaaS
Outcome-based monetization models

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Keeping up with the trend of enterprise customers wanting to pay for the outcomes of services, this article aims to explore the pros and cons, challenges, and enablers of the outcome-based monetization model for XaaS.

Introduction

Based on industry trends we have tracked so far, providers have consciously been trying to craft customer-centric solutions to entice customers and sustain their loyalty via subscription models for their anything as a service (XaaS) offerings. But one of the evolving expectations from customers is further differentiation when choosing a solution or a provider. According to an Enterprise Customer Success Study and Outlook conducted by Deloitte, 76% of enterprise customers at some point have discussed outcomes with their technology providers, indicating the direction of the evolution of customer preferences. Keeping up with this trend, more and more companies are adopting the outcome-based monetization model where customers are charged based on the outcome delivered by a solution, a model which can potentially benefit both the provider and the customer.

The last article in Deloitte’s Digital Industrial Transformation series, “Scaling up XaaS,” discussed how to align XaaS with digital industrial transformation. This one will focus on the outcome-based monetization model.

Outcome-based monetization models put the focus on business outcomes, where the customer pays for a predefined tangible business outcome or value realized from services consumed. For example, Hitachi Rail, which is building new trains in the United Kingdom, will get paid when its customers (UK train operators) complete journeys that meet a battery of key performance indicators (KPIs) throughout the journey—maintenance, fleet availability, onboard temperature, and so on. Hitachi owns and maintains the trains, and the Network Rail System in the United Kingdom pays Hitachi for “on-time service.”

FIGURE 1

Scaling up to outcome-based monetization solutions for XaaS

From selling products/services
Pay upfront for products/services

and selling solutions
Pay per subscription (includes packaged solution of products and services)

to selling outcomes
Pay per outcome

Source: Deloitte analysis.
Hitachi is thus providing “train as a service,” converting the capital cost of trains into an operational expense. This pricing model involves frequent interaction between the provider and the customer during the entire life cycle, as both the customer and provider are invested in achieving the outcome. The provider is exposed to high risks as well as potentially high rewards.

Other industries are also pivoting toward this model. For example, Signify, instead of selling bulbs, provides a contract ensuring lights will never go out at Amsterdam’s Schiphol airport. Schiphol entered into a five-year contract with no upfront investment. Signify owns the maintenance, replacements, and continued optimization of the lights installed and Schiphol pays a monthly service fee that includes energy and maintenance costs.

To adopt the outcome-based monetization model, companies need to adjust their internal capabilities (such as invoicing capabilities), which involves cost and effort. It is therefore important to assess whether the outcome-based business model is a good fit for a particular service and consider a set of factors across people, process, and technology required to enable this model and realize the expected benefits.

**Enablers of the outcome-based model**

We have identified six key aspects of the customer’s evolving preferences and dynamic shifts in the market that make the outcome-based monetization model an attractive and feasible option (figure 2).

**FIGURE 2**

*Key market aspects that make the outcome-based monetization model attractive and feasible*

Source: Deloitte analysis.
1. Providers gain a competitive advantage as they get an opportunity to differentiate themselves from the competition with products/services that can deliver a specific outcome expected by the customer.

2. They can build stronger business relationships with their customers because of increased credibility and frequent business outcome-related interactions.

3. Customer payment preferences are taken into account as customers pay for what they believe the service is worth, which further results in strong adoption of the service or product by the customer.

4. Emerging technology such as the Internet of Things (IoT), artificial intelligence (AI), or machine learning (ML), etc., is empowering providers and companies with an improved ability to accurately measure and control outcomes; this forms the basis of outcome-based monetization models.

5. Better pricing control based on realization of agreed-upon outcomes allows for increased revenues. The model enables pricing flexibility where the provider can develop a dynamic pricing mechanism based on customer need.

3. Finally, customers can link payments to clear business outcomes or value and can share risk with the provider.

This model is expected to drive customer acquisition and customer retention and open up opportunities for upselling and cross-selling.

**What does it take to enable outcome-based monetization?**

XaaS providers looking to monetize their offerings via the outcome-based model must consider a variety of factors. Figure 3 lists out the additional options that providers must determine for designing outcome-based business models. A close examination of these will help determine whether this model is viable or not for the service concerned.

**FIGURE 3**

Additional options that providers must determine for designing outcome-based business models

<table>
<thead>
<tr>
<th>What do we monetize?</th>
<th>Who do we sell to?</th>
<th>How do we monetize?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes</td>
<td>Customer segment</td>
<td>Billing</td>
</tr>
<tr>
<td>Time</td>
<td>Enterprise</td>
<td>Onetime</td>
</tr>
<tr>
<td>Financial impact</td>
<td>Consumer</td>
<td>Recurring</td>
</tr>
<tr>
<td>Volume</td>
<td>Federal</td>
<td>Hybrid</td>
</tr>
<tr>
<td></td>
<td>Small/Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>businesses</td>
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</tbody>
</table>

**Who are involved?**

- Provider
- Channel partner
- Supplier
- Customer
- End user

Source: Deloitte analysis.
WHAT DO WE MONETIZE IN TERMS OF OUTCOMES?
Outcome-based contracts can be framed in a variety of ways depending on the type of value promised. When the value offered is time, a specific quality KPI is promised over a defined period. Textio charging customers based on the number of people they plan to hire, instead of the number of job posts is an example of volume-based outcomes. In the case of Signify’s light-as-a-service offering, the value being offered is financial impact in the form of revenue gain or cost reduction (besides other gains). Service/quality assurances that promise zero or minimal issues due to defects or failures are the value offered in the case of Signify’s promise of lights never going out at Amsterdam’s Schiphol airport.

HOW DO WE MONETIZE THESE OUTCOMES?
The terms of the contract define the monetization strategy: How the product/service will be charged and the unit of measurement, billing, payment schedule, and financial outcome-sharing terms in the form of either a profit/loss-sharing or penalty clause.

WHO IS INVOLVED IN DELIVERING THE OUTCOMES?
Once the outcome to be delivered is defined, it is imperative to identify who is involved in delivering the outcome. Typically, this includes the provider, channel partner, supplier, customer, and end user. Once identified, define each party’s role and responsibilities and the capabilities each one of them needs to have or build to enable outcome delivery. This must be clearly called out in the contract. Another key driver is to tie the risk and reward mechanism to respective parties.

Framework to assess viability of adopting the outcome-based model
While the outcome-based business model has its benefits, providers must consider a couple of aspects while exploring this model to improve customer loyalty or strengthen pricing power.

- Do we have the required capabilities to adopt the outcome-based business model?
- If we do shift to the outcome-based business model, will it realize the benefits that we expect it to?

Based on the capabilities and expected benefits, the provider can be placed in one of the four quadrants on the capability maturity framework (figure 4).

Champion. Champions are equipped with the right capabilities and the industry/market in which they operate lets them provide a unique value that customers are willing to pay for. For instance, UnitedHealthcare (UHC), one of the largest healthcare providers in the US, has been offering value-based care programs for over many years. Value-based programs reward health care providers for the quality of care they give to patients, as opposed to the quantity of billable services they provide. Under value-based models, payment is linked to quality and outcomes in addition to holding providers accountable for the care they provide. Linking payments to outcomes promotes proactive outreach, coordinated care, and evidence-based practices. It also encourages proactive and preventive care and helps reduce health care waste. A champion must focus on refining and strengthening the value proposition in line with customer expectations and the market or competitive situation to avoid charging customers for a value that later becomes a basic expectation.
Aspirer. An aspirer realizes revenue growth by switching to the new model but lacks the capabilities necessary to enable the model. They may already be offering value-based services in their sector but may not have the resources needed to deliver or charge for the value they provide.

There are a growing number of search engine optimization (SEO) agencies offering guaranteed SEO-based search ranking. Though there is a market for such an offering, it is not easy for a provider to guarantee such an outcome, given that so many other companies may be vying for the top rank and that Google owns the algorithm. Google Search Central provides a guidance for companies who are looking to engage SEO agency.7

Aspirers need to invest in skill development, change management, and inculcating a value-driven mindset in the organization.

Seeker. A seeker has the necessary capabilities to switch to the new model, but the paucity of benefits makes the switch unviable. The value delivered by their product/service is either too basic for customers to consider paying extra for it or not critical enough to command a premium or entails a high cost of value development and delivery.

Given this, the seeker can enter a partnership with a larger enterprise that can benefit from this model, sell its intellectual property to the enterprise, or not enter into outcome-based business models altogether.

For example, if a startup that develops a blockchain network finds that the blockchain network helps with traceability but has little to offer in terms of outcomes, it can partner with a larger enterprise such as a hardware original equipment manufacturer (OEM) or a software company that...
promises outcomes. For a hardware OEM, blockchain can be used to track the source of hardware parts. In the case of a software solution, blockchain can help ensure pirated copies are not used by customers.

**Explorer.** An explorer neither has the necessary capabilities to switch to the new model nor can it realize revenue growth through the shift. Take the example of automobile companies that are currently unable to use an outcome-based model centered around mileage, since there are too many user-dependent factors that affect mileage—driving speed, quality of fuel, maintenance of the car. The manufacturer cannot compensate for these variables through technological capabilities. At the same time, an outcome based purely on mileage may not help the company command a premium as the buying decision is based on other factors such as quality of service and features provided. Expanding their offerings horizontally—through telematics services or sensor data monetization—is a better way of adopting outcome-based business models.

Depending on their current position in the matrix, providers can take up the appropriate strategic direction that helps them move to the outcome-based model.

**The significance of benefits and capabilities**

Evaluating capabilities for the above framework involves evaluating whether the provider has the required people, processes, and technology in place to support the outcome-based business model. Similarly, benefits can be measured in terms of customer acquisition, retention and expansion, pricing power, and cost reduction.

**DIMENSION 1: BENEFITS**

**Customer acquisition, retention, and expansion.** Service providers need to evaluate whether the model will attract new customers, retain existing ones, and increase upsell/cross-sell revenue. The advantages of risk-sharing and provider accountability should attract, retain, and encourage customers to increase their spend on the provider’s products and services. If this is not likely due to product limitations, competition, industry trends, etc., the new model will not yield benefits. For example, customers may not opt for a cab/taxi service that charges them based on how quickly/safely they reach the destination—speed and safety are after all bare minimums. However, customers may opt for a cab/taxi service that offers premium services such as on-demand content, instant calling, etc.

**Pricing flexibility.** Can the provider vary pricing based on customer environment complexity and need? The model should empower the provider to dynamically increase/decrease their prices based on the level of risk-sharing and accountability, and thus capture higher margins from the outcome-based business model.

**Costs.** Finally, will the costs incurred by switching to the outcome-based pricing model make it viable for the provider? It is imperative that investment costs do not exceed expected monetary benefits anticipated from switching to this model.

**DIMENSION 2: CAPABILITIES**

Shifting to an outcome-based business model will require providers to align on value definition for outcome-based contracts, enhance product/services to measure relevant usage metrics aligned with outcomes, upgrade the order-to-cash processes to ensure the necessary billing systems are in place to track outcomes, produce accurate invoices, and enable bundling of outcomes over a period. The end-to-end systems in place will have to be realigned to facilitate measurement of metrics such as close cycle time, past due payments, and collection to terms as specified in the outcome-based contract.
However, while moving to an outcome-based business model, providers need to particularly keep in mind the impact it will have on the following capabilities:

**Product/services.** Under the outcome-based model, the product features need to accommodate transparent measurement of the agreed metrics. The product/service may have to be calibrated with the singular aim of achieving a specific target metric, which might mean a compromise on other metrics that are not part of the agreement.

**Pricing model.** Pricing in the traditional model is direct and linearly linked to the cost of the product or service. In a subscription model, pricing is based on either the value offered or the units consumed and is linked to discrete units of output delivered.

Under an outcome-based business model, pricing is based on performance or outcomes. Hence, it is imperative to invest in systems that enable accurate measurement of outcomes and price estimates.

**Sales enablement.** Sales incentives under the traditional model are linked to the number of units sold. However, upon movement to subscription businesses, providers focused on cross-sell and upsell while tracking metrics such as customer health and invest in sales enablement systems. Under an outcome-based business model, sales incentives are based on planned annual contract value, driving up initial sales cost ratios. Systems founded on AI/ML-based regression models that can forecast the outcome delivered to the customer...
aligned upon metrics are foundational to enable this.

**Billing/payments.** Under the traditional model, billing is done upfront when goods or services change hands and the receipt is generated. Under a subscription model, billing is usually sought at the beginning or end of a periodic cycle. Under an outcome-based business model, billing typically takes place at the end of the contract cycle and is dependent on the outcome delivered. The provider and the customer measure, mediate, and validate metrics linked to business outcomes independently. Commensurate to the level at which the outcome has been realized, the billing amounts vary after alignment between the stakeholders.

**Revenue recognition.** Under the traditional model, revenue is recognized once the product or service is bought and under the subscription model, consumers are charged periodically based on consumption. Revenue is recognized as the service is consumed and billed. Under the outcome-based business model, according to IFRS, revenue is recognized once the agreed-upon outcomes are delivered. The revenue accrued depends on the level of outcome achieved. However, a challenge that providers need to keep in mind is the complexity of administration of this process from both a commercial and an accounting perspective.

Providers will have to evaluate the following considerations from a capability standpoint:

**Process:** Are there processes in place for the enablement of the new model?

We recommend that the provider move to the new model only if there are robust processes in place for cross-functional collaboration: product, pricing and monetization, sales, metering and measurement, billing and payments, and revenue recognition. For example, if the provider has defined processes for tracking outcomes realized by the customer, the maturity of their metering and measurement capability is high. On the other hand, if there is hardly any interaction with the customer after the sale, the capability maturity is considered low.

**People:** Are the skills, organizational structure, and incentives aligned to the model?

Successful implementation of the outcome-based model entails a well-defined organizational structure with interdependencies and employees enabled to adapt to the new model. Apart from this, it is also important to have clear metrics to measure the success of the new model and the corresponding impact on employee compensation and incentives. For example, if the teams are well-trained on different customer segments, their business objectives, usage patterns and preferences, and the quantifiable value typically delivered by the solution, the enablement capability maturity is high.

The outcome-based business model entails a customer-centric approach, and the organization should build a customer-centric culture with set KPIs and targets accordingly. Leadership vision and communication are needed to drive this shift. Transparent, well-defined, and shared goals to drive outcomes across the organization are the foundation to a successful model.

**Technology:** Is there technology in place to record, analyze, bill, and transact in the outcome-based model?

Technology support is critical, especially in application functionality and architecture scalability along with data insights. For example, if powerful telemetry and analytics tools are used in automated collection and analysis of customer usage data, the insights capability maturity is high. But if qualitative customer usage data is manually collected and analyzed, maturity is low.
Architecture scalability is imperative. As more customers are onboarded, providers need to scale their architecture to support more functionality and complexity. The number of transactional data points increases as providers need to work closely with customers to drive outcomes, often collaborating by accessing critical data points from customers to collectively drive outcomes.

Data and analytics capabilities need to be mature. Tools and processes to collect customer usage data need to be automated and capture accurate data. Analytical tools need to be enabled with powerful telemetry to process a large amount of data in real time to successfully measure and track outcomes.

**Key considerations and challenges for providers**

*Difficulty in pricing.* One of the most prevalent challenges is forecasting the outcomes, determining the risk-to-reward ratio, and infusing them into the pricing strategy. Outcome-based business models require an alignment between providers and customers on metrics that are required to be tracked. More often, the metrics that matter to the customer differ from those that matter to the provider. Inability to accurately capture outcomes also poses a significant challenge to measuring outcomes.

*Hurdles in collaborating with partners.* Implementation of technologies that enable outcome-based pricing requires collaboration with a large set of partners/other providers selling to the customer. This can be challenging as not all of them may follow outcome-based pricing. Moreover, rather than working together to deliver a successful product/service and creating the maximum value, each party may manipulate the outcome in its own favor, trying to maximize individual gains.

In case of the automobile industry, with the connected vehicles trend and the subsequent increase in the number of sensors in vehicles, OEMs are taking on more responsibility for insurance. For instance, BMW’s CarData service offers third parties with customer data (such as odometer reading, average mileage etc.). This sharing is done only upon customer consent and in accordance with the EU General Data Protection Regulation (EU-GDPR) and the California Consumer Privacy Act (CCPA). Only if a BMW customer has actively provided consent to sharing of vehicle data, his/her insurance company, who must be registered with CarData, will receive data in an encrypted format. The insurer is now able to offer personalized services based on vehicle data. This, in turn benefits the customer with reduced insurance premiums calculated based on actual mileage/usage data. However, such a partnership between the OEM and insurance company will have implications in terms of infrastructure, regulation, and risk. Determining who owns the customer relationship and ongoing revenue opportunity in such cases could become challenging.

*Challenges in expectation management.* Changes in leadership, both on the provider and the customer side, can impact expectations from an outcome-based business model. This could lead to sudden changes of terms and objectives, which could be detrimental to the success of such a contract. Market variables such as revenue decline within or across industries due to external factors could impact outcomes adversely. Similarly, mergers and acquisitions on the provider or customer front can change expectations while the contract is in place. Technology evolution could render a previously determined outcome easily attainable while innovation from a competitor could limit the potential of your solution.
Agreeing on a holistic set of KPIs. Alignment on primary KPIs and how each KPI will be measured and monitored is important, so that involved parties cannot cut corners to gain advantage through the model. This can be enforced through a robust governance structure (including both the customer and provider stakeholders) that has established relevant processes and policies to keep a check on the quality of service delivery and validates the KPIs reported by the relevant parties. For example, in professional services companies where value-based billing is used, KPIs are proactively defined and managed through a governance process that offers transparency to the process.

Uncertainty due to external factors. Inability to capture outcomes accurately can significantly impact the feasibility of outcome-based business models. This could be due to defects in sensors and measurement devices as well as inaccurate capture of customer interactions and sentiments. There is even scope for manipulation of the impact due to technology use. Variables such as component quality, operator proficiency, humidity, and machine effectiveness also pose challenges to such contracts.

Issues with legal terms. Development of core principles, agreed-upon measures, and due diligence requires significant effort. Outcome-based contracts work well when customers and providers are equally invested. Customers need to put in the time and effort needed for good governance and performance delivery. Both parties share business strategies and confidential information about business priorities and aspirations. The provider must align its business with the customer and trust that the customer will adhere to a true risk-and-reward model. Each measurement should be capable of being objectively monitored by both parties. There are also external legal issues arising out of guarantees/assurances provided to the customer.

Challenges in financial accounting and forecasting. In traditional business models, accounting and revenue recognition capabilities are designed based on a predictable model of invoicing and payments. However, when an organization pivots toward an outcome-based model, the accounting and revenue and profit recognition capabilities need to be transformed. Accounting and revenue recognition rules need to be redesigned and reconfigured because revenue is often based on consumption and predefined outcomes. The organization should put in place a mechanism to monitor usage and calculate prices systematically as well as to measure delivery performance across outcome variables such as availability, financials (US$ saved), and volume, and generate invoices, manage payments, and recognize revenue accordingly.

Conclusion

Providers need to carefully assess using a two-pronged approach—whether they have the required capabilities in place to switch to outcome-based business models and if so, will the switch give them the benefits they expect it to. The maturity assessment framework aids with this.

Outcome-based business models are practical only when both provider and customer align on framing a true risk-reward model. We recommend that providers consider the guidelines below as they seek to adopt the outcome-based business model.

Take time to build contracts. Conducting due diligence prior to adopting an outcome-based business model is imperative to its success and helps overcome difficulty in setting the right pricing and hurdles in collaboration with partners.
Consider conducting a proof of value study (PoV). It is worth conducting a PoV, which prioritizes tangible business outcomes and puts real numbers behind the projections, thereby helping set the right price and eliminate challenges in expectation management.

Agree on KPIs, who will measure them, and how the measurement will be conducted. Having solid KPIs gives all parties a shared interest in achieving success. If KPIs are poorly designed, it tends to lead to conflict causing hurdles in collaborating with partners.

Be willing to walk away if the risks of an outcome-based business model outweigh the rewards. If there’s insufficient trust between the provider and consumer to get over early concerns, it bodes well for businesses to consider not to move to an outcome-based business model.

The evolving customer preferences and market shift toward outcome- or value-based contracts have paved the way for outcome-based business models. In this customer-centric world, customer demands are increasing, and organizations need to think how to deliver or offer solutions and models that customers would prefer. Though providers have been promising outcomes for some time, they are gradually moving toward monetizing these outcomes to differentiate themselves in the marketplace.
Endnotes


5. Signify, “Circular lighting for a sustainable future.”


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