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Usage-Based Monetization for Enterprise: Expanding Business Possibilities Beyond the Subscription

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Introduction¹

Imagine traveling back in time 50 years to 1965.

If a person took this journey, how would he react, even if he had previously lived through this period? The people in 1965 would essentially look the same as we do today. The landscape would likely be familiar, though most cities would have far fewer people. Many “oldies” from the nascent rock ‘n roll era would be hitting the airwaves for the first time; and, of course, Elvis would still be with us.

A big shock to anyone from 2015 would be the difference in “things.” Huge cars made from mostly metal and chrome, with only an AM radio, would be burning cheap gas. They would contain no airbags or seatbelts. They would also have no screens. Typewriters, many not even connected to electricity, would function without a digital display. Phones constrained to a physical location, would operate only with a rotary dial, with no touchscreen to be found. In fact, the only displays one might see would be beaming from the cathode ray tubes in televisions. Though the body of a TV set would be quite bulky and even fashioned into a piece of furniture, the TV screen itself would be small relative to 2015 standards. Most of them would provide viewers with a black and white picture, and only receive a few channels.

Many devices today offer some type of digital display—even toothbrushes. Yet, the real story is behind the ubiquitous screens. The advances in technology, in computing power, and in connectivity over the last 50 years make it difficult to comprehend how NASA landed people on the moon with less total computing power than that contained within one of today’s smartphones.²

With continuing technological innovation, the world of 2015 is very different from that of 1965. However, not everything is different. In 1965, any business in any industry required more money coming in the door than going out in order to remain viable. The same is true today. Examples abound of companies that arise with an innovation, backed by venture capital, which initially lose money. But, at some point in their evolution, they either make money or disappoint their investors.



¹ In preparing this report, Stratecast conducted interviews with the following representatives of goTransverse:

- James Messer, Co-Founder, President, and Chief Executive Officer
- Geoffrey Coleman, Chief Operating Officer
- Mike Murphy, Chief Business Officer
- Heather Burton, Vice President of Marketing

Please note that the insights and opinions expressed in this assessment are those of Stratecast and have been developed through the Stratecast research and analysis process. These expressed insights and opinions do not necessarily reflect the views of the company executives interviewed.

² Many have postulated this idea, starting soon after the first smartphones were commercially available. Many have “proven” this idea, using different comparisons of computing power. The point, however, is undeniable—a smartphone is a powerful computing device used by millions or even billions of people today. For many, it is just one of several interactive devices that enable our digital lifestyles.

A lack of positive revenue flow eventually leads to the deep pockets of the investment community moving on to the next business opportunity. This fact leads to the first maxim of this week's SPIE:

Innovation Without Proper Monetization is Just a Great Idea.

Monetization converts an idea, a business plan, or a consumable asset into money today, just as it did in 1965. A grocery store sells apples, while a convenience store sells snack items and gasoline, all in exchange for money. While none of this is revolutionary, it leads to the second (and final maxim) of this week's SPIE:

If You Can Not Bill For It, It Is Just a Hobby.

Stratecast regularly examines the monetization processes and functions within the communications service provider (CSP) sector.³ This week's SPIE looks at how other industries are now benefiting from monetization concepts first developed within telecom; and how taking advantage of the details within the monetization process itself enables innovation in surprising new ways. This report also assesses how one company—goTransverse—is enabling a variety of customers across various industries to change how they do business; applying monetization principles in somewhat unconventional ways.

Monetization – A Fancy Name for Billing?

Billing is a term often misunderstood. Many equate billing to an invoice, which is the customer-facing artifact of the billing process. Behind the scenes, the billing process may range from simple to very complex, but the end result—an invoice asking for payment or a receipt for payment—is usually understood by the paying customer.

This report uses the term “billing” and the broader concept of monetization interchangeably. When the word “billing” is referenced, unless specified otherwise, it is referring to the “billing process” for creating the customer bill or invoice, and not just the bill that is delivered to a customer.

How do businesses, in any industry, monetize their products and services? There are presently three primary monetization models:

- One-Time Payments
- Subscription or Recurring Billing
- Usage-Based Billing

One-Time Payments

One-time payments are easily understood; but even with this simple monetization model, there may be hidden complexity within the full billing process. Buying a newspaper on the street involves very little beyond the simple exchange of money for the newspaper, either to a vendor or perhaps even from a dispensing machine. The billing process in this case rarely includes a receipt.

Grocery purchases also involve a one-time payment, but while on the surface this may seem to be a simple exchange of money for goods, there is often much more involved in the monetization

³ Stratecast just released the first of 7 reports on the global CSP end-to-end billing market, published as OSSCS 16-04, *Global CSP Billing 2015 Edition Part 1: End-to-End CSP Billing Market Forecast and Market Share Analysis*, May 2015. The remaining reports in the series will be released in the coming months. To obtain a copy of this report or any other Stratecast or Frost & Sullivan report, please contact your account representative or email inquiries@stratecast.com.

process. For example, at checkout, each item is scanned, and a price is assigned to that item through the store's point-of-sale catalog. Certain items may be discounted for a limited time, or there may be a discount that occurs if some multiple of an item is purchased. There may be other savings if a customer is a member of the store's loyalty program. In addition, the customer may have third-party coupons that will affect the price they pay the store. The store must track these discounts to recoup these costs from the coupon provider in behind-the-scenes wholesale business-to-business (B2B) transactions. Finally, some items are taxed, and some are not.



The billing process also is likely to interface with the store's inventory process, so the store can automatically know when to refill its stock of items for purchase. Payment can be in the form of cash, check, credit or debit card, or even other forms such as government issued vouchers, which themselves may have complex rules governing their validity. The final receipt involves some complexity, as it outlines the entire transaction in detail, often along with advertising and loyalty point accumulation.

One-time payments are used for both business-to-consumer (B2C) transactions, as well as for B2B transactions. While B2C transactions typically involve immediate payment, as just described, B2B transactions often have payment terms—balance due within some period of time, such as net 30 days. One-time payments are used both in the physical world and in the virtual world of the Internet. Buying items from Amazon.com, for instance, typically involves a one-time payment to complete the order.

Subscription Billing

Subscription billing, also called recurring billing, has blossomed as a monetization model with eCommerce. One example lies with music streaming services: a consumer pays a set amount, and receives unlimited music streaming for some period—say, a month. Unless cancelled, the service continues for the next period, and the next. In the physical world, subscriptions with automatic renewal still exist, but are less common.

Subscription billing involves increased complexity over the one-time payments method, but subscription billing also offers increased benefits for both parties. For the subscriber—be it a consumer in a B2C model or another business in a B2B model—the advantage is typically a lower price versus a one-time payment. For the seller, the promise is a recurring revenue stream, versus a one-time influx of cash. There is also a psychological advantage—a surprisingly large number of subscribers keep paying for a time-based subscription that goes beyond when they stop using the service.⁴

While the subscription model itself is not complex, it does increase the sophistication of business models that utilize it. The original business model for recorded music, in the physical world, was to sell copies of the music in the form of records, tapes, or compact discs, via a one-time payment. Radio play of the music was designed to drive consumers to buy physical copies of an artist's music. As music moved to the digital realm, the first business models mirrored the physical world, selling at first digital “albums,” then moving to individual songs. As broadband speeds increased, streaming services became more prevalent, allowing customers to listen to the “radio” first as a service on their computer, and later as a service on their mobile devices.

⁴ This is not backed by a scientific study, but by the author's own experience. More than once, months have passed before realizing that I am continuing to pay for a service that is not currently being consumed.

The first music streaming services were free and were supported by advertising; but many suppliers now offer these services as premium subscriptions that eliminate ads. Premium services also provide other benefits such as inducements to download a song for offline listening. Most music streaming services, free or premium, allow the purchase of individual songs or albums, in digital or physical format. **In essence, music streaming services combine the functions of “radio” and “record store,” with the ability to buy music via a one-time payment or to consume unlimited music via subscription.**

The term “subscription” brings to mind a long-term (one or two years) subscription to a physical newspaper or a magazine, which did not automatically renew. In the digital world, it is much easier to have monthly (or even more frequent), auto-renewing subscriptions, at much lower price points, not only for news, magazines, music, but even for access to broadband services.

Previously sold in a licensed model, with an upfront and often hefty payment, software is increasingly offered today in a “Software as a Service” (SaaS) model. SaaS does not necessarily have to be sold in a subscription monetization model, but often is. For instance, the latest version of Microsoft Office (Office 365) is available in a SaaS model, at approximately \$10 per month or \$100 per year, a significantly lower amount than a customer is likely to pay for a licensed copy, at least initially. The SaaS model also provides a substantial side benefit: the software remains more up-to-date, which hopefully operates with fewer issues for the user, and less support concerns for the supplier.

“As a Service” offerings, generically referred to as “Anything as a Service” or XaaS, present excellent examples of why monetizing goods or services through just a subscription billing model can limit business creativity possibilities, as will be discussed below.

Usage-based Billing

The communications industry long ago incorporated usage-based billing, which combines one-time payments, subscription billing, and the ability to monetize usage, all rolled together. Even a phone bill from decades ago utilized parts of all three monetization models:

- One-time payments typically revolved around something unusual—perhaps the ordering of a new phone or establishing a new or additional line.
- Subscription billing was used for local calling; a set price on a per month basis allowed unlimited calling within a defined geographic area.
- Usage-based billing involved the monetization of long-distance services or other types of toll calling—with the call measured in minutes, and charged based on roughly the distance between the called and calling party locations.

Usage has evolved in telecom, from time—minutes of a voice call—to number of sent and received text messages, to gigabytes of data transmitted and received. In the utility industry, usage may be a measurement of electricity consumed. In the transportation industry, usage may be distance traveled, fuel consumed, or road markers crossed. **The key for any industry is that whatever is utilized as a usage metric must be a measurable quantity.**



Monetization based on a measurement of usage may not initially sound revolutionary, but with a few real-world examples, that first impression will change. Consider a company that sells backup electrical generators designed to supply electricity whenever the primary energy source is temporarily disrupted. Key customers might include hospitals, schools, production line manufacturing, and public gathering places, to name a few—places where losing power for even a short time is unacceptable. In the past, the only option for these organizations was to purchase the generator, at a fairly large capital expense. The business challenge faced by the generator manufacturer, along with the services teams installing and maintaining these generators, was in collecting revenue from the companies that purchased them.



How about “Generator as a Service?” This could be done utilizing a straight subscription monetization model; but by adding a usage component, the potential business model expands. In fact, Generator as a Service is now a viable alternative to the capital-intensive process of purchasing and maintaining an on-site generator.

The service involves the telemetry of generator usage data to a remote processing site that renders a regularly scheduled bill for generator services. Under the direct purchase option or Generator as a Service option, the physical generator is located on-site. However, the service option involves a generator fitted with usage counters and remote transmission capabilities to enable a service-level bill based on usage and other potential parameters. These are in addition to the monthly “subscription fee” for having the generator on-site, and the “recurring monthly testing fees” for making sure the generator remained operational. Usage fees are charged relating to standard maintenance fees, and tiered levels of usage with escalating premium usage fees the longer the generator is in continuous operation; e.g. rate per Kilowatt-hour (kWh) generated increases the longer the generator is in service.

All of the sensor data to make this scenario possible is transmitted to a remote monitoring station, where the information from a particular generator is compiled with others for billing and maintenance purposes. With a well-designed business agreement, both sides can win—the generator supplier is poised to garner more revenue overall through the life of the contract, and the business receives power backup provided via a smaller, recurring operating expense, without the need to incur a large up-front capital cost. All made possible by a sophisticated usage-based billing platform and some innovative thinking outside the box.



This is an example of how a monetization model can present a disruptive force to what might be considered an established, old-school industry. The usage-based billing platform enables innovation in the business model itself, creating new possibilities for how to offer a product or service to customers, and perhaps in opening a market up to a new set of customers.

Another Example of Strategic Disruption Enabled by Monetization

When contemplating innovation, often the most ready examples that come to mind involve software and Silicon Valley firms such as Facebook and Google. As the Generator as a Service example illustrates, the usage-based monetization model enables innovation in places one might not expect. An additional example comes from the broadcasting industry, where a company that specializes in

hardware to enable video broadcasts realized it could offer value to the market by also offering its products through a service model.

In this industry, video is shot in the field with a camera capable of sending a video uplink, via satellite, to a studio or control room for editing. The uplink can also be sent directly to broadcast, via television, Web, or other distribution channels. The video hardware company’s products enable the middle of this process—sending the video feed wirelessly from camera, across the Internet, to an editing or distribution point. The proprietary satellite uplink is replaced by a mobile broadband connection. With this hardware, the cost that would otherwise be associated with more traditional delivery channels is dramatically reduced.



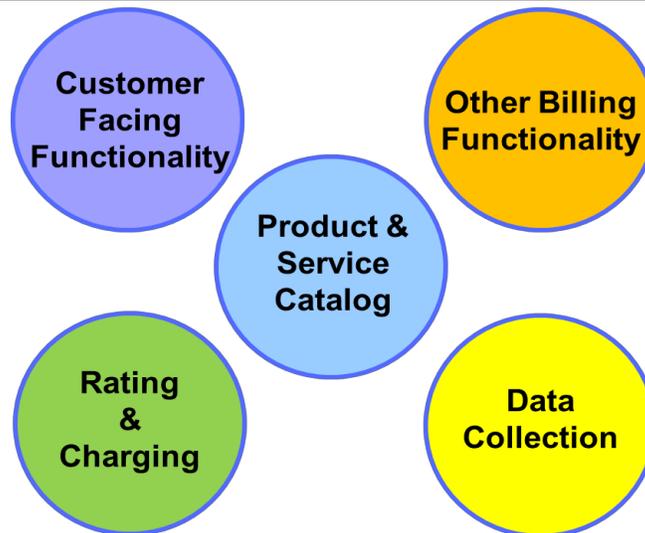
By offering its products as a service—in this case, combining existing products with video cameras on the front end, and distribution tools on the back end—the company greatly expanded the potential customer pool. Existing customers may supplement purchases with “Broadcast Video as a Service” cameras for special events. The local high school can film and distribute a game when its team makes it to the finals. Smaller news organizations can now broadcast video from events that previously could only be covered with still photos.

The monetization process makes this innovation possible; and utilizing usage-based billing provides flexibility in the implementation of this new business model. Perhaps a pool of cameras is provided, and pool of video usage is allowed, much like a family plan with mobile phones. In other words, up to a certain level of usage, one price is paid per day or per hour, with extra paid for extra usage, regardless of which camera in the pool of cameras is utilized.

The Key Components of Usage-Based Billing

Exhibit 1 outlines the key components of a usage-based billing platform suitable for most enterprises. Note that the model is a simplified view of how Stratecast defines CSP billing, eliminating the telecom-specific aspects that most industries do not need.

Exhibit 1: Key Components of a Usage-Based Billing Platform



Source: Stratecast

Rating & Charging

One of the primary functions of a usage-based billing system is referred to as rating & charging. Rating is the assignment of usage value to a measured event. Charging is the calculation of the price a customer pays. Except for simple cases—for example, one-time payments and subscriptions—calculating a charge requires rating. Collectively, the process is referred to as rating & charging. Increasingly, business needs require that rating & charging occur in real time.

Other Billing Functionality

There is a set of functions that every billing platform needs to include, or provide interfaces to other systems that provide this functionality. These functions include:

- Invoicing
- Accounts Receivable
- Collections
- Taxation
- Revenue Recognition
- Payments
- Reporting Facilities

Customer Facing Functionality

Customer facing functionality contains the customer management tools and order fulfillment capabilities for the enterprise to assist its customers with purchases and support. Self-service falls into this category.

Product & Service Catalog

A catalog ties together the rating & charging, other billing functionality, and the customer facing functions. This catalog defines what products and services are available for purchase, along with how to rate and charge for these offerings, and how to bill for them. The catalog may also indicate how to actually provision these services to make them available, whenever applicable.

Data Collection

Data collection will vary depending on what is measured. In the telecom world, this is referred to as mediation, where data from the network is processed, or mediated, for use by the various components of the billing system (and other systems). For enterprise, there must be a data feed from somewhere in order for the rating & charging system to act.

Enabling Innovation via Monetization

One of the advantages of usage-based billing is the data—data that contains information which can be utilized for monetization purposes and for insight and intelligence. Analytics—in particular, what Stratecast refers to as purpose-built analytics⁵—underlie both CSP billing and enterprise billing

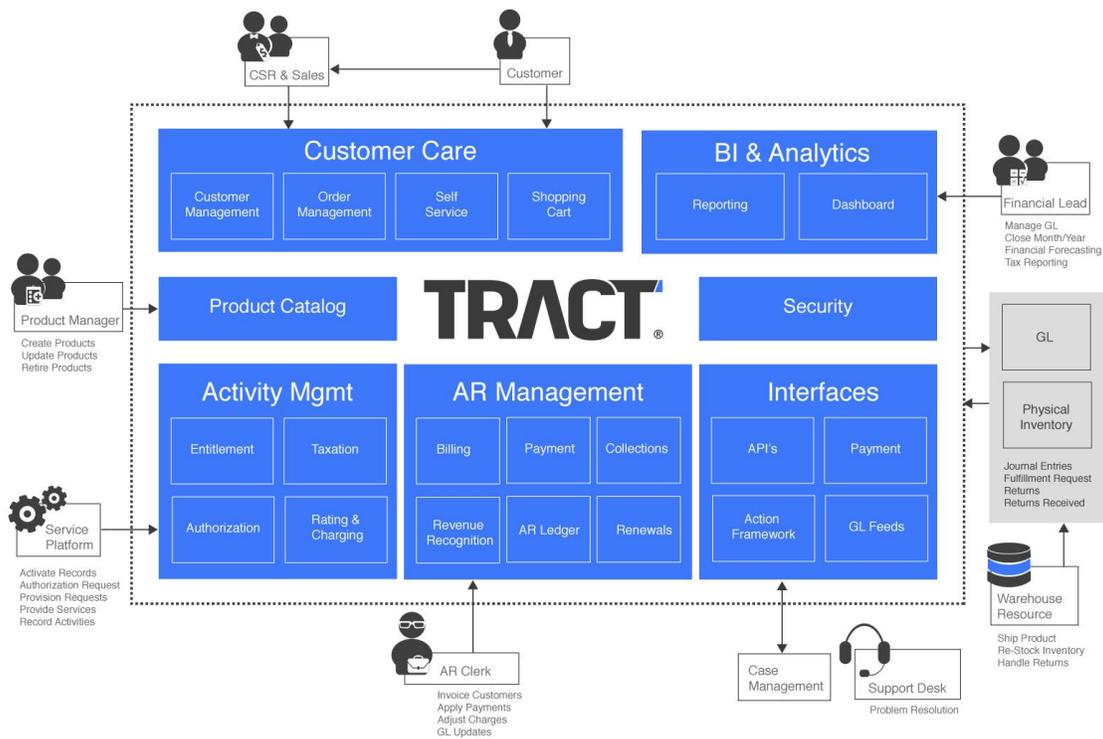
⁵ The terminology "Purpose-Built Analytics" is not meant to discount Big Data and Big Data Analytics, but to differentiate. Big Data continues to be a focal point for most industries. Suppliers are many; and the amount of money spent by CSPs and enterprises in all sectors now surpasses several billion dollars annually. The importance of this data for addressing customer and business challenges cannot be overemphasized. In fact, Stratecast has a dedicated Big Data & Analytics practice tied to the evolution of the Big Data market, the addressable needs of organizations pertaining to the use of Big Data, and the business opportunities that Big Data affords to both the supplier and enterprise marketplace. For more information please contact your account representative or email inquiries@stratecast.com.

platforms. Many enterprises have a minimal number of data scientists on staff, so analytics that are purpose-built to solve specific business problems and answer key questions are essential.

Everything discussed to this point remains of little value to an enterprise unless the billing functionality can be delivered in an affordable manner. The traditional model of licensing software and delivering on site requires a larger upfront capital expense, along with ongoing IT expenses for hardware and support personnel that are likely to raise the financial bar too high for many companies. Utilizing a SaaS model eliminates most of the IT expenses, provides the most advanced functionality possible at all times, and moves the cost of such solutions to a potentially lower operating expense. If priced correctly, a SaaS model opens the door for more potential customers.

An example of a cloud-based monetization and customer support solution is shown in Exhibit 2. The TRACT platform, offered only in a SaaS model, was first initiated in 2008 by goTransverse.⁶

Exhibit 2: TRACT: Billing and Revenue Automation Platform



Source: goTransverse

Many of the company’s competitors offer billing solutions aimed at the enterprise market, but limit the flexibility of their solutions by focusing solely on the subscription monetization model. TRACT incorporates usage, subscriptions and one-time payments. The company describes TRACT as:

If you can measure it, we can bill for it.

⁶ goTransverse is a private supplier of monetization solutions. Headquartered in Austin, Texas, the company offers end-to-end revenue management and customer management solutions to CSPs and enterprise customers. The company’s founders come from telecom billing backgrounds, and were looking to expand the sophisticated CSP billing paradigms to other businesses in other industries, but at a more affordable price.

The examples provided earlier in this report—Generator as a Service and Broadcast Video as a Service—are real examples of what TRACT is enabling in diverse industries. The company is not targeting one industry or a few related industries, but believes its solution has applicability in virtually any industry. Additional real-world examples include:

- In the transportation and shipping industry, one global customer is utilizing TRACT in support of its North American port operations. When a container ship arrives in port, it must be offloaded and hauled to another location using a chassis (trailer). Historically these trailers have been provided free of charge. The company recognized the untapped revenue potential that these chassis represent and leveraging TRACT, provide the chassis owners a platform for monetizing the use of the chassis by charging for their use on a daily rental basis. Additionally, as the ship is unloaded, the ship itself becomes much lighter and can become unstable, so another future service is refilling the ship with water for ballast. Here the usage component is a measurement of the water pumped into the ship.
- Closer to the communications industry is the media and entertainment industry. One American premium cable and satellite television network looked to break into a new region of the world with its Over-The-Top (OTT) entertainment subscription service across 17 countries in the Middle East and North Africa. It is also expanding into other underserved markets soon to be announced. TRACT provides the monetization capabilities for this company, currently in a subscription model, but with the flexibility to later add a usage component. TRACT also calculates the daily revenue recognition for the subscription service.
- In the retail sector, one company manages the fulfillment and shipping for a number of large web sites. These items often have different unit prices based on the number of a particular item ordered; e.g., one mug may cost \$5, but, order a thousand, and each mug costs \$3. As this company grew, it soon needed an automated monetization system to operate at scale as there was as many as 30,000 items on a single invoice. TRACT now serves as the platform for managing the company's product catalog, pricing schema, bundling definitions, volume discounting, and invoice billing. The platform also allows the company to recognize revenue upon shipment.
- Hardware manufacturers are jumping on the Internet of Things (IoT) movement. A global leader in the design and manufacturing of high-performance satellite positioning products (Global Navigation Satellite Systems, or GNSS) wanted to disrupt the market by offering its correction signals via L-Band satellites or over the Internet at accuracies ranging from meter to sub-decimeter levels. The company offers its services as a subscription and pay-as-you-consume model. TRACT is the platform enabling the company's new service offerings.
- In a final example, one of the world's largest WordPress hosting companies, powering approximately 20% of the top 1,000 highest trafficked websites, chose TRACT to support its subscription offerings, and also to add a usage component. Measuring items such as number of installs, number of visits per month, amount of data usage, and storage consumption enabled this hosting company to remain competitive on price while monetizing end-customers that consume more of its service offerings. Usage-based billing in the form of TRACT enabled the company to alter its business model to better serve its customer base and its bottom line.

Stratecast The Last Word

This week's SPIE started with a maxim:

Innovation Without Proper Monetization is Just a Great Idea.

Monetization or the billing process is often thought of as a necessary evil to just pay the bills. And it does do that; but the monetization process itself can lead to innovation.

One-time billing is not complex, is easily understandable, and is often necessary. Adding a subscription component brings benefits to both the buyer and the seller, expanding the possibilities to serve a particular market. With the addition of measuring usage, and building a monetization model using elements from all three approaches—along with some business creativity—disruptive innovation is enabled.

The real-life Generator as a Service example illustrates this point. The innovation has little to do with the generator itself, but with how it is now offered to the market, and in how customers pay for this valuable service.

The innovation is in how the generator is monetized.

This new business model has disrupted an entire industry—an industry that did not seem a likely candidate for disruption. The usage-based billing platform enables innovation in the business model itself, creating new possibilities of how to offer a product or service to customers, and perhaps opening a market up to a new set of customers.

The communications industry has long utilized usage-based billing platforms. Stratecast has noted that innovation within this industry is often centered on the monetization process—monetization is the enabler of new business models and many new ideas.

With cloud-based solutions such as TRACT from goTransverse, almost any industry now has the same type of powerful usage-based billing engine with which to innovate, with which to think outside the box, and with which to disrupt the status quo.

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