Top of Mind
Revenue management and predictive analytics

Illuminate the future
Technology companies need every edge they can get to stay competitive. The ever-accelerating pace of business change has made speed-to-insight critically important.

One way for tech companies to achieve fast speed-to-insight is through a new generation of predictive revenue analytics systems now being enabled by rapid advances in big data analytics and machine-learning technologies. Early deployments of such systems are providing much deeper insights into business performance and market dynamics than ever before possible. The following report describes EY’s observations and analysis of where tech companies are today, where they need to be and what they need to consider in terms of revenue management and predictive analytics. We think that you will find the information both informative and provocative. Enjoy.

Greg Cudahy  
EY Global Leader – TMT  
Technology, Media & Entertainment and  
Telecommunications

Dave Padmos  
EY Global Technology Sector Leader  
Advisory Services

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The report at a glance

EY’s observation of technology companies’ current revenue management capabilities and our analysis of evolving market dynamics reveal a mismatch. Tech companies must make the leap to sophisticated, enterprise-wide predictive revenue analytics or risk losing a competitive edge going forward.

- Tech innovation driving business disruption makes quarterly and year-over-year (YOY) performance harder to predict, especially as boundaries between tech and other sectors increasingly blur.
- Faster business change makes speed-of-insight critically important.
- Tech company transitions to cloud-based services complicate revenue expectations, making predictions harder – but also produce more detailed consumption information than previous business models.
- Big data analytics and machine learning have made rapid progress in recent years, providing faster, deeper business insights and revenue predictions than previously possible.
- A new revenue recognition standard will likely result in companies upgrading existing reporting systems in the next two years, creating an opportunity for tech companies to leap to state-of-the-art predictive revenue analytics.
- New predictive revenue analytics systems can’t return great results immediately after installation. They require time for training the teams that will use them and the artificial intelligence (AI) algorithms that will “learn” your business.
- A series of decisions needs to be made so that the input into new predictive revenue analytics systems will be the right curated data – with attribution at the right levels of granularity.
- Organizational decisions must be made, particularly regarding the use of enterprise-wide metrics, business unit metrics or both.
- Unless tech companies start thinking now about making their strategic move to predictive revenue analytics systems, they will not be able to adapt quickly enough to remain competitive with those that do.

“Given that being first to market is such a huge advantage in technology, imagine how important it is to predict what will come. Predictive revenue analysis capabilities can give tech companies that edge.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
Responding to the opportunity

The time is now for tech companies to transition to revenue management and predictive analytics

A confluence of urgent business need, regulatory necessity and the readiness of advanced technology means it’s time for technology companies to make the leap from today’s adequate revenue reporting and forecasting to enterprise-wide revenue management and predictive analytics. Yet, our observation of many established tech companies suggests few, if any, are close to achieving such state-of-the-art revenue management. This is concerning, because today’s “adequate” revenue reporting, forecasting and metrics will not remain so for long.

“The better your connection to your customers, the more predictability you’re likely to have in your revenue streams.”

Michael Kelly
Advisory, Performance Improvement
Ernst & Young LLP (US)

Today’s revenue reporting and forecasting approaches will be obsolete soon because as technology innovation drives accelerating waves of business disruption, it’s more challenging than ever for tech companies to analyze and forecast revenue and profitability. Business is becoming more unpredictable as competition increases, new business models undermine previously reliable revenue sources and the boundaries between technology and other sectors continue to blur. Reliably continuing to meet quarterly and YOY performance goals requires tech companies to make near- and long-term investments in revenue reporting and predictive analytics that provide business insights to support high-velocity management decision-making – a task well beyond the ability of current revenue reporting systems.

The regulatory “opportunity” is even clearer: a new revenue recognition standard taking effect in 2018 will likely result in companies upgrading their revenue reporting systems (see page 5).

Meanwhile, recent rapid advances in big data analytics and machine-learning technologies make possible much deeper insights into enterprise-wide financial performance – and the underlying business and market dynamics driving that financial performance – than ever before.
New recognition standard creates a strategic opportunity

Tech companies should view the new revenue recognition standard taking effect in 2018 — Accounting Standards Codification (ASC) 606 — as an opportunity to implement advanced revenue management capabilities that predict emerging business trends. Many firms will make substantial systems and process changes to meet ASC 606. As they do, it makes sense to think more strategically about revenue management and predictive analytics tools.

ASC 606 is expected to have wide-ranging impacts on accounting processes and information systems for transaction processing and revenue reporting. Tech companies appear to be underestimating the level of effort and lead time required for the change. It could take 24 to 30 months to diagnose, design, implement, test and convert data to meet the deadline.

Cloud business models drive need for predictive analytics

A pervasive change driving the need for sophisticated revenue management and analytics capabilities is the stack-to-solution trend — a shift from selling products at one or more points along the technology stack to selling cloud-based solutions. At the same time, completely new cloud-based business models, such as those in the sharing economy, have even broader implications for revenue management. Sharing economy businesses are radically new and typically operate via cloud-based services that generate a staggering volume of transactions.

Thus, cloud-based services revenue tends to be more complex and less predictable than revenue from selling traditional hardware or packaged software, primarily because it can be influenced by many rapidly changing factors. Revenue is harder to forecast because customers pay for services as they consume them — and customer behavior is especially hard to predict. It becomes more critical than ever to understand customers’ consumption patterns and all the factors driving those patterns. The good news is that cloud services can be monitored to provide much more detailed information about consumption than was previously possible. That information, supplemented by user data from social media and other sources, becomes input for predictive analysis using rapidly maturing big data analytics and machine-learning-based AI. But these business models, and the sheer volume of data they create, drive new analytical complexities. “How does the company manage all this data so that they not only report financial data accurately, but really understand the profitability of the business?” asks Mr. Matt Alexander, Advisory Services, Ernst & Young LLP.

Further, the significant capital investment required to build cloud infrastructure also presents challenges to analyzing the profitability of cloud-based solutions. “If you can’t forecast revenue accurately enough in this consumption-based model, you may make a poorly timed capital investment that eats into your profitability. Cloud-era businesses cry out for predictive revenue analytics,” says Mr. Alexander.

“If you’re opening up your revenue heartbeat anyway, that’s an opportunity to integrate new capabilities that enable better business insights and better revenue forecasting and planning.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
"A big question at many companies is, why can’t I see my financial results in real time? Companies want capabilities that enable them to view accurate financial data instantly – and break them down by attributes such as customers, geographies and products."

Michael Kelly
Advisory, Performance Improvement
Ernst & Young LLP (US)

Tech company analytics today: not necessarily predictive or enterprise-wide
But getting to predictive revenue analytics requires tech companies to achieve leading practices in every facet of revenue management – and enterprise-wide. In practice, however, our observation of leading technology companies shows many actively pursuing sophisticated revenue management capabilities, yet none that have achieved the ultimate goal of business-wide predictive analytics. “Every company is passionate about this and wants to get farther ahead, but I know of no company that is leading across all of the revenue management dimensions. Most companies have invested in revenue analytics, but typically only within business units, rarely at the enterprise scale,” says Mr. Alexander.

Critically, a blend of revenue analytics and management reporting is needed to provide the level of depth required for company leadership to proactively manage the business. Such “blended” revenue management and analytics should begin with a compliant revenue recognition process and end with a single source of truth – an enterprise reporting and analytics platform containing data that is consistent across the business and in alignment with corporate organizational and product and service hierarchies. Such systems require appropriate governance, data quality management and access management processes to support accurate and validated data for reporting and analysis.
Instead, our observations found leading tech companies have an inconsistent understanding of the processes and attributes that leading revenue management and analytics capabilities should include. More specifically, we observed:

- Most technology companies are implementing what we would consider leading practices in only one or two of the seven critical functions we’ve identified (revenue analytics; revenue reporting structure; management reporting tool; standard reports and metrics; role-based information; enterprise information management; and standard data definitions).
- Revenue reporting rarely is viewed as a distinct enterprise capability—we only observed one company that built an enterprise platform for enhanced revenue reporting. But it is recognized as an important goal.
- Companies are making extensive use of statistical inferences to facilitate predictive analytics, and some are starting to explore the use of machine learning to formulate operational decisions through automated analysis of big data.

“Such observations make clear that while tech company leadership is moving toward the enterprise-wide approach to predictive analytics and revenue management, much work remains to get them there.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
Challenge

The pace of technology-driven business disruption is making it harder for technology companies to analyze and forecast revenue and profitability.

Insight

Without enterprise-wide predictive revenue analytics and management reporting, companies will have difficulty spotting and understanding revenue and profitability trends in time to refine business strategy before it’s too late.

Ask yourself

- Do we have the right capabilities to understand not just the revenue, but also the profitability of new products and services and the evolving half-life of current products and services?
- How do we enhance our processes to support faster revenue reporting and analysis with the required accuracy?
- How confident are we about our ability to forecast revenue of new products and make the right investment decisions, given the dynamic nature of the industry?

In the following two sections we explore leading practices in more depth and assess the challenges that must be overcome.
Responding to the technology challenges

Big data analytics, machine learning and intuitive graphical interfaces are finally ready – it’s time to up your game

Like the boy who cried wolf, big data and AI technologies such as machine learning have promised to remake business analytics for years without delivering on that promise. However, recent rapid advances in both areas are now combining with intuitive graphical interfaces. Today, they are ready to produce analytics capabilities with truly transformative potential. The following insights respond to the technology challenges to getting there.

“Being first to market is a huge advantage in technology, so imagine how important it is to predict what’s coming next. Predictive revenue analysis capabilities can give tech companies that edge,” notes Mr. Alexander. Companies that don’t use predictive analytics in fast-changing, highly competitive markets will find it harder to forecast declines in existing revenue streams or the potential growth of fast-expanding new services.

To be most effective – and accelerate “speed to insight” – big data analytics and machine learning both require that you collect together all enterprise data. Advanced capabilities for analyzing revenue and profitability rely on a detailed, end-to-end view of revenue across the entire business, including the key drivers that influence sales and profitability. That requires gathering information from across the business to create a single, consistent “source of truth” – a data lake that includes revenue-related data, such as transactions, and customer information, including demographics. This central information source can then support advanced analytical tools as well as the enterprise reporting platform.

Unfortunately, tech companies do not generally have a single source of truth. Instead, data is fragmented in multiple dimensions. In practice, tech companies face challenges pulling together centralized information from diverse business groups. Each group may have its own dynamically evolving business model that has served the group well, making them disinclined to work with others toward an enterprise solution. Added to that fragmentation is the use of M&A to acquire new capabilities and expand into different markets. “Focus and prioritization are required to make enterprise-level data lakes happen. Often, the biggest challenge is the underlying data, because companies have acquired and divested product suites and channels, so there are internal factors to consider. Then there are external factors, such as the regulatory environments in different countries. And all of these factors are constantly changing,” says Mr. Alexander.

“An obstacle for centralized data lakes is that business units with an urgent need for analysis capabilities often forge ahead and build their own without waiting for an enterprise-wide system.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
Challenge
Enterprise-level revenue analytics

Unlike other industries, most technology companies have no dedicated enterprise revenue reporting and analysis tool. Revenue reporting is just a subset of management reporting – a few line items on the P&L report – with limited detail available from the reporting tool that supports both management and financial reporting. Revenue analysis is usually conducted by redundant groups within each business unit, using disparate analytics databases or offline data repositories. As a result, revenue reporting and analysis is inconsistent and subject to interpretation, and is not widely shared across the organization.

Insight
Gather structured and unstructured data from across the organization into a centralized data lake managed by a big-data technology such as Hadoop. Enterprise revenue analytics tools can then be made accessible to all users, enabling analysis of the data in multiple ways to discover narratives that support business decision-making. This approach allows analysis of more detailed revenue data without impacting performance of the enterprise management reporting tool. Moving analytics functions from business units to a common enterprise platform officially supported by IT can eliminate redundant tools and require fewer people for data analysis.

Ask yourself
What new analytical possibilities would open up for our organization if we aggregated all available data into a central data lake for in-depth and ongoing analysis?

“A holistic, enterprise-wide approach to revenue analytics helps leadership and other decision-makers to manage and grow the business pro-actively.”

Arvind Ramakrishnan
Advisory, Performance Improvement
Ernst & Young LLP (US)
Challenge
Wider use of statistical inferences

Some technology companies are combining big data, statistical modeling and marketing analytics to gain enhanced customer insights to create customized marketing campaigns. And some operational groups at technology companies are using statistical analysis to drive business decisions; however, this is not a common enough enterprise-wide practice.

Insight
In contrast to data used for management reporting, data used for statistical analysis does not need to be fully reconciled with data used for external reporting purposes, since minor variances in analytical data may not have a material impact on the analysis of customer trends.

Ask yourself
Will an enterprise-level approach to revenue analytics processes help accelerate our organization’s use of statistical inferences?

“Technologies for enabling enterprise-wide revenue analysis, including big data analytics tools, are rapidly maturing.”

Arvind Ramakrishnan
Advisory, Performance Improvement
Ernst & Young LLP (US)
Challenge
Deploy machine learning

Most people probably use machine learning – the science of getting computers to act without being explicitly programmed\(^1\) – dozens of times a day without knowing it. Machine learning is the AI technology that uses statistical data mining to, for example, make speech recognition practical and enable self-driving cars.\(^2\) Typical business applications include mining historical data to predict future customer activity, including trends, behaviors and patterns.\(^3\) While machine learning holds tremendous potential to transform technology companies, we found it being pursued for predictive revenue analytics only in pockets at major companies. Goals include optimizing logistics, achieving greater operational efficiency and predicting customer spending patterns. One company is using machine learning for analytics in its customer intelligence unit; another has established a dedicated research lab to focus on big data and machine learning.

Insight
Tech executives who want to get the most out of their companies’ data should understand what machine learning can do. While machine learning is still emerging, companies cannot afford to wait. Leading practices point toward leveraging machine learning to bolster companies’ predictive analytics capabilities. The goal is to do more, faster, with existing data.

Ask yourself
How can our organization begin piloting machine learning technologies to enhance our predictive revenue analytics?

“With today’s analytical tools, users can ask a question in natural language and an analytics engine provides a graphical answer.”

Jim Little
Advisory, Performance Improvement
Ernst & Young LLP (US)
Responding to the organizational challenges

Enterprise-wide analytical benefits are worth the effort

Building an enterprise reporting and analysis platform that makes advantageous use of data lakes and machine learning requires strategic thinking about business direction, metrics that matter, and centralized data governance and management. The following insights respond to the organizational challenges to getting there.

All this takes time, investment and management focus. But the potential benefits – especially faster decisions, deeper analysis and the opportunity to spend more time considering complex strategic decisions and less time compiling data – make it necessary. Corporate groups and individual units gain the ability to quickly view trends in other business groups – without having to approach those groups and request reports. According to Mr. Jim Little, Advisory, Performance Improvement, Ernst & Young LLP: “The days when people were willing to wait for answers are over. With today’s analytical tools, users can ask a question in natural language, and an analytics engine provides a graphical answer.”

Building an enterprise reporting and analytics platform can also provide cost advantages for business groups, which may not need to fund separate analytics capabilities. The ability to view data across multiple business groups can help inform product development and pricing decisions. A simple example: a business unit that’s planning to bundle cloud storage with an innovative new device could analyze the way customers consume the company’s existing cloud services, to determine the optimum amount of storage to include.

Finally, to support revenue management and predictive analytics capabilities, companies must be able to analyze revenue and gross margin data by multiple dimensions. With cloud-based services, customer consumption patterns become more critical than ever, including new consumption metrics such as page views, monthly active devices or storage by person. Other key dimensions include products and services, channels, geographies and time. Many technology companies cannot quickly analyze all these key dimensions. Some excel at reporting revenue and margin by product but struggle to report by customer. Others can easily report by customer segment but struggle to report by product at a lower level. In addition, appropriately detailed attribution and allocation and goal-oriented standard reports and metrics are critical elements of the foundation necessary for enterprise-level predictive revenue analytics.

“In return for the effort it takes to create an enterprise-wide infrastructure for predictive revenue analytics, the payoff is faster decisions and more time spent thinking through strategic alternatives instead of compiling data.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
Challenge
Centralized enterprise information management (EIM)

Without the right data to analyze, the quality of your analytics practices become irrelevant. Centralized EIM and governance are essential to the data consistency needed for alignment across business units and corporate groups. With governance of master data (e.g., product data, chart of accounts or cost center/profit center hierarchy) centralized and integrated with IT and business governance processes, expeditious and accurate changes can be made that benefit the entire organization. In decentralized models, it’s possible for changes to benefit one business unit while adversely impacting other business units and functions, resulting in confusion and disruption. As part of centralized EIM, role-based information access is key to identifying clear ownership and accountability, which helps organizations quickly resolve data quality issues and assign responsibilities to the correct owners (while minimizing exposure of sensitive data to unauthorized users). However, because many organizations have not invested in information access management (IAM) tools capable of role-based access control, they assign access rights at the department or function level.

“The increasing need for more finance data makes the centralized EIM view more important – and harder – as engineering and social data becomes critical in predictive reporting.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)

Insight

Lack of centralized EIM is an important element holding down the average revenue management maturity rating for the technology companies we observed to 3.3 out of 5 (see Maturity model levels, page 21).

Ask yourself

What EIM practices can we improve to raise our organization’s revenue management maturity level?
Challenge
Dedicated revenue attribution system

Just as many technology companies integrate their revenue recognition process into their ERP system (so that revenue accounting is as close as possible to the source data), some also incorporate revenue attribution and allocation capabilities into ERP (integrated with the general ledger). In both cases, the combination is less than ideal. In the case of revenue recognition – where the need for change is frequent because business models evolve rapidly – difficulty implementing quick adjustments to revenue accounting logic outside the usual ERP system release cycles often dictates that substantial amounts of revenue accounting take place outside the ERP landscape. In the case of attribution and allocation of revenue, a dedicated system provides more flexibility, ties more easily to master data and lets you curate data before it reaches the reporting system.

Insight
For organizations with complex revenue accounting needs, a specialized revenue accounting system automates the process and supports more effective reporting for internal and external stakeholders. Maintaining a dedicated attribution and allocation engine (as part of the ERP landscape) allows that engine to be leveraged for other purposes, such as curating data that might be too large and detailed for the financial or management reporting system to handle.

Ask yourself
- In what ways can our organization make better business decisions with more holistic revenue accounting detail?
- Is the revenue reporting data being fed into our organization’s decision-making processes the best it can be to help us make the right decisions?

“Accurate and precise revenue attribution is a key foundational element that helps organizations to develop truly useful predictive revenue analytics insights.”

Arvind Ramakrishnan
Advisory, Performance Improvement
Ernst & Young LLP (US)
Challenge
Separate internal and external reporting tools

Most companies treat revenue reporting as just a subset of management reporting, and use a single platform both for external financial reporting and for internal revenue and management reporting. However, we observed how some companies benefited by using one platform for management reporting and another for financial reporting. Of course, these companies still reconciled at a high level to the official management reporting tool, but they also obtained additional detail about revenue data. This approach enhances the potential for business decision-making revenue analytics insights without impacting the performance of the management reporting and external P&L reporting platforms.

Insight
To provide more detailed revenue analysis without impacting the performance of the external P&L reporting platform, separate the internal revenue management and analytics platform from the external reporting platform. The two systems must be reconciled at the appropriate levels.

Ask yourself
Is our organization being limited by integrated internal and external reporting platforms?

“Effective reporting tools that disseminate consistent information across the organization are equally important to revenue management and analytics as consolidating data into a single source of truth.”

Michael Kelly
Advisory, Performance Improvement
Ernst & Young LLP (US)
Challenge
Precision of revenue and gross margin details

Most companies lack the ability to structure their master data or configure their systems to support data tagging and revenue reporting by all the key dimensions — customer consumption patterns, product and service, channels, geographies and time. This is often due to outdated legacy systems and design of the master data. Reporting fully burdened gross margin by product and service presents a similar major challenge for many organizations. Often, an inefficient and prolonged close process, as well as interaction with contract manufacturers, prevent overheads from being allocated for timely month-end and quarter-end reporting. The lack of a cost of goods sold (COGS) allocation engine means that fully allocated COGS are performed manually offline in spreadsheets.

“Without a strong foundation of detailed, accurate cost assignment and overhead allocation, any revenue analytics capability you build will rest on shaky data.”

Jim Little
Advisory, Performance Improvement
Ernst & Young LLP (US)

Insights
The following approaches can support more detailed, timely reporting of revenue and margins:
- Assess master data design and identify opportunities for improvement that support reporting at a more granular level.
- Streamline the close process to support timely allocation of overheads to products and services for monthly margin reporting.
- Invest in a COGS calculation engine to systematically drive cost assignment to the lowest possible level of products and services detail.

Ask yourself
What enhanced business insights might our organization derive from more detailed and timely reporting of revenue and margins?
Rationalizing and standardizing reporting can reduce both operating costs and cycle time. It’s among the most effective ways a tech company can increase reporting efficiency without a major investment—but few do it. Most lack the sponsorship, alignment and discipline to achieve and maintain streamlined standard reports. Standard metrics are an excellent alternative way to gain efficiency because they typically require less effort to attain alignment. Standard definitions and calculations support a consistent view of the business for corporate and business units and allow “apples-to-apples” comparisons across different business units. Efficiency is realized when finance spends less time translating results from a business unit view to a corporate view.

**Insight**
For large organizations that have multiple business lines, agreeing on a complete business-wide standard set of key performance indicators (KPIs) and metrics may prove impractical. The following can be excellent alternative approaches:

- Recognize a distinction between corporate KPIs (to which all business units must conform) and business unit KPIs (which are specific to each business unit). This approach helps organizations to develop a standard set of corporate metrics, while providing flexibility for business units.

- Establish business-goal-oriented metrics, sometimes called “power metrics,” comprised of relevant bundles of lower-level KPIs. Examples include “improve customer acquisition effectiveness,” “increase customer retention” and “improve price realization.” KPIs for the price realization metric would include average price realization by product or service, price realization by sales rep, price elasticity of demand, etc.

**Ask yourself**
Will “freeing” business units to measure unique KPIs more closely enhance their decision-making?

“Standard, high-level goal-oriented metrics are emerging as a way to provide a unifying view across the enterprise, while simultaneously driving revenue growth across all services and groups.”

Matt Alexander
Advisory Services
Ernst & Young LLP (US)
Conclusion
Start planning for revenue management and predictive analytics now

With the advent of new and more volatile technology business models such as cloud-based services and the sharing economy — and with the firm conviction that newer and still more volatile models lie just ahead — tech companies have little choice but to make the leap to sophisticated, enterprise-wide predictive revenue analytics or risk losing competitive edge.

In that light, tech companies considering changes to any aspect of revenue management or revenue reporting would do well to take a step back and develop a strategic long-term plan. The purpose of that plan should be to establish a revenue analytics platform that helps you to respond quickly when disruptions happen, so you can maximize revenue opportunities across your product suite. Near-term changes should fit into your long-term plan.

We encourage all tech companies to start thinking about their revenue management and predictive analytics plans right away. The main reason is that these programs take time to bear fruit. In addition to training staff, additional time is needed for people to adjust to the new approaches. On top of that, it even takes time for the technology itself to adapt — with machine learning, it takes time for the algorithm to train itself. Unless tech companies start thinking now about making their strategic moves to predictive revenue analytics systems, they will not be able to adapt quickly enough to remain competitive with those companies that do.

“Within five years, machine learning will revolutionize the way companies plan and predict their revenue.”

Jim Little
Advisory, Performance Improvement
Ernst & Young LLP (US)
**Batch data:** system-generated data feeds, commonly between a data repository and a reporting tool, and generally containing huge amounts of data.

**Machine learning:** a field of study that gives computers the ability to learn without being explicitly programmed. It focuses on prediction-making through the use of computers.

**Revenue accounting:** the process of applying accounting rules to determine revenue generated from sales transactions.

**Revenue allocation:** the distribution of an organization's total revenue based on its structure (e.g., by division or business unit).

**Revenue attribution:** the process of aligning or matching specific marketing costs to the sales revenue a company receives.

**Revenue management:** the application of analytics to predict consumer behavior and optimize product availability and price, with the goal of maximizing revenue growth.

**Revenue recognition:** accounting logic based on accrual accounting and matching principle to determine the accounting period in which revenues and expenses are recognized.

**Stack-to-solution:** technology stacks being displaced by cloud-integrated solutions.
Maturity model levels

1 – **Basic**: revenue analytics currently not performed and no separate management reporting system in place. Minimal standardization of reports or metrics to evaluate the business.

2 – **Developing**: revenue analytics occasionally performed by certain departments or groups. Management reporting system receives feed from general ledger for further customization. Key reports and metrics used only at the department level.

3 – **Established**: revenue analytics periodically performed and provide visibility into key drivers within specific departments or groups. Management reporting system contains relevant detail across dimensions and is used for revenue reporting. Dashboards, reports and metrics defined and standardized across the enterprise.

4 – **Advanced**: revenue analytics routinely performed and data lakes contain all relevant data and dimensions. Standard analytics toolset available. Management reporting system can access various external sources for additional dimensions on an as-needed basis. Dashboards, reports and metrics tailored to provide customized and specific insights.

5 – **Leading**: revenue analytics forms the basis for corporate strategy and business direction. Management reporting system provides reports on revenue drivers and includes an interface to revenue analytics. Dashboards, reports and metrics are aligned with corporate strategy to provide a platform for business decisions and to evaluate performance.
Sources

1 “Machine learning is reshaping security,” CSO Online, 23 March 2016, ©1994-2016 CXO Media, Inc. a subsidiary of IDG Enterprise.
2 Ibid.

About the report

This report describes EY’s view of the steps technology and tech-enabled companies should take to implement advanced revenue management capabilities, including predictive analytics. Our analysis is based on broad experience, augmented by secondary research and in-depth interviews. Our interviews included EY partners and other subject matter professionals working with leading technology companies pursuing predictive analytics, to identify what those professionals observed as critical to achieving success.
Technology sector leader
Greg Cudahy
EY Global Leader – TMT
Technology, Media & Entertainment and Telecommunications
+1 404 817 4450
greg.cudahy@ey.com

Technology service line leaders
Channing Flynn
EY Global Technology Sector Leader
Tax Services
+1 408 947 5435
channing.flynn@ey.com

Jeff Liu
EY Global Technology Sector Leader
Transaction Advisory Services
+1 415 894 8817
jeffrey.liu@ey.com

Dave Padmos
EY Global Technology Sector Leader
Advisory Services
+1 206 654 6314
dave.padmos@ey.com

Guy Wanger
EY Global Technology Sector Leader
Assurance Services
+1 650 802 4687
guy.wanger@ey.com

Article contributors
Matt Alexander
Advisory Services
Ernst & Young LLP (US)
matthew.alexander@ey.com
+1 206 654 7646

Michael Kelly
Advisory, Performance Improvement
Ernst & Young LLP (US)
michael.kelly04@ey.com
+1 213 977 3737

Jim Little
Advisory, Performance Improvement
Ernst & Young LLP (US)
jim.little@ey.com
+1 206 262 7012

David Macor
Tax, People Advisory Services
Ernst & Young LLP (US)
jdavid.macor@ey.com
+1 214 969 8630

Arvind Ramakrishnan
Advisory, Performance Improvement
Ernst & Young LLP (US)
arvind.ramakrishnan@ey.com
+1 213 977 3912