



The missing piece

How EY's Health Outcomes Platform can create "triple wins" through outcomes-based contracting



Building a better
working world

Contents

Executive summary	1
Prologue – Life Sciences 4.0: securing value through data-driven platforms	2
Section 1: Releasing the breaks	4
Section 2: Enter the platform	7
Section 3: EY’s Health Outcomes Platform	11
Conclusion – be a “game-changer.” The world has enough followers	21



Executive summary

In our previous paper *Passing fad or game-changer?*, we explored the potential for outcomes-based contracting (OBC). Executives around the health ecosystem understand that moving to new value-based models of care delivery requires a common vision that links reimbursement not to product utilization but to actual improvements in health outcomes. The use of OBC is an important step in the transition to value-based care and to deepening relationships between life sciences companies and other health stakeholders, especially payers and providers. Yet, while there is a great deal of talk about the importance of OBCs, they are not being used at scale. That's primarily because no one organization has all the capabilities – or the data – to construct an outcomes-based contract on its own.

In this paper, we take a closer look at what is required to make outcomes-based contracts a reality. Key activities include creating, managing and assessing OBCs in a transparent, secure and scalable way. We believe **EY's Health Outcomes Platform (HOP)**, an industry platform designed to help remove the complexity, cost and risk of outcomes-based contracts for all players in the industry, can have a key role in this endeavor.

This paper is divided into three sections. The first outlines the key points of “friction” that have limited the uptake of OBCs and the ability to deliver better patient outcomes and value. The second section discusses the core requirements of an ecosystem-wide solution facilitate OBCs. The third explains the functionality and benefits of our Health Outcomes Platform and how it can enable so-called “triple wins”: better outcomes and experience for patients, better value for money for payers or providers and increased patient access for life sciences companies.

Ultimately, we will explore three critical questions:

- ▶ How do we build trust between multiple parties so that they can work together in a frictionless way?
- ▶ How do we radically simplify how data can be accessed, integrated and used in the right way for the benefit of all?
- ▶ How can we be part of a standardized industry platform but maintain the flexibility to create differentiated contracts at scale?

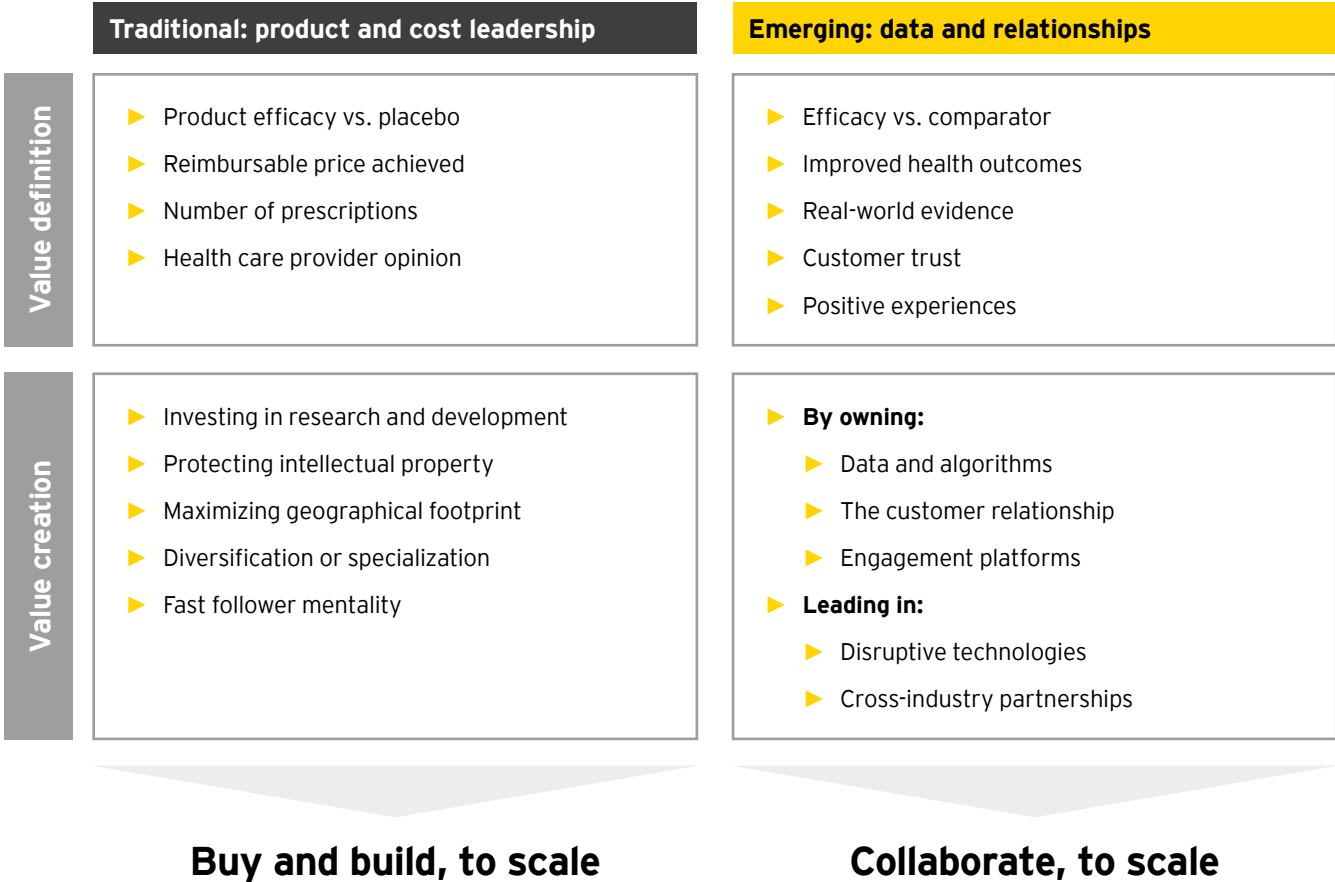


Prologue – Life Sciences 4.0: securing value through data-driven platforms

In *Life Sciences 4.0: securing value through data-driven platforms*, EY's latest edition of our *Progressions* series, we explored how health is being reimagined as a result of scientific and technological change and rising customer expectations. We also examine the ramifications for life sciences companies' market offerings, business models and the new capabilities needed as the disciplines of health care and technology merge to become "health technology."

In this fluid environment, every company developing health care products and services is a data company, and, therefore, a technology company. Likewise, every technology company that has access to health-related, consumer-generated information or other health data is a health care organization. At the same time, the ubiquity of mobile and peer-to-peer sharing tools are transforming consumers into super consumers. As these super consumers encounter engaging experiences in other areas of their lives, they demand more of the same from their interactions with the health ecosystem. Consumers, not organizations, are now at the center of this market paradigm.

Figure 1: The changing dynamics of value

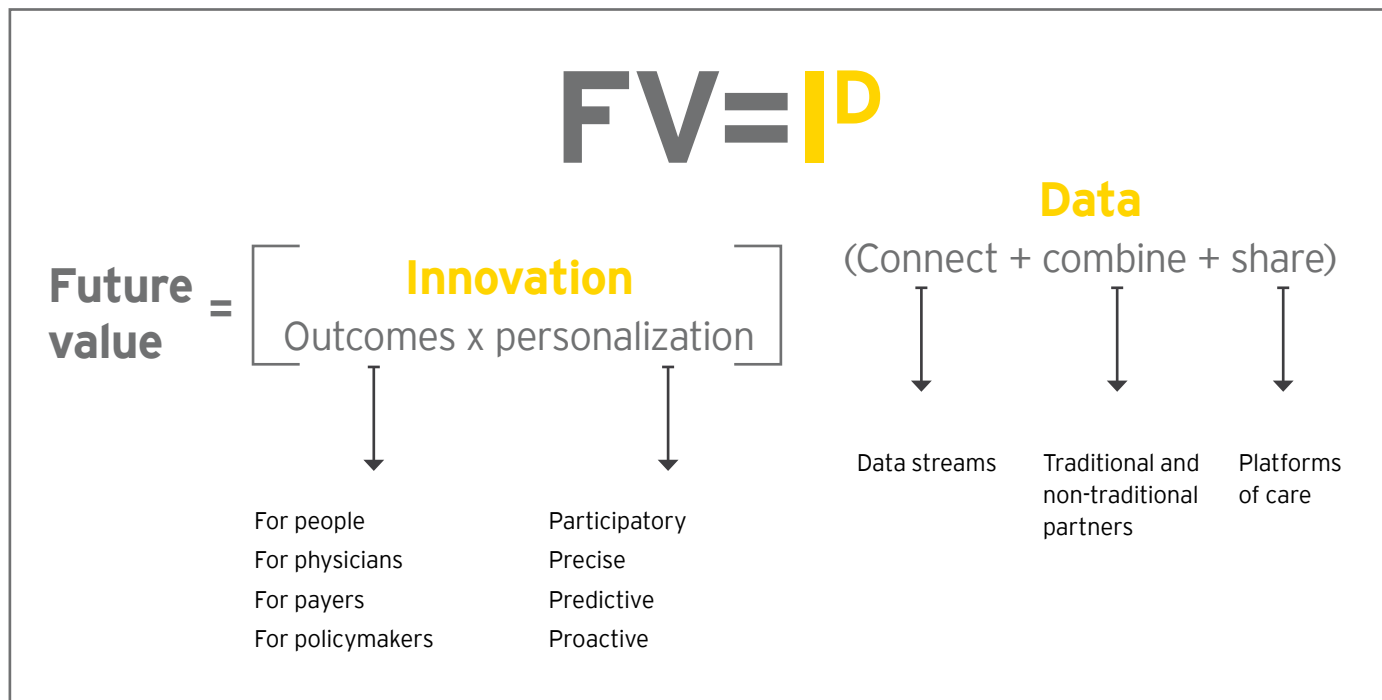


In this new environment, value is both defined, and created, in different ways than it has been historically (Figure 1). As a result, life sciences companies must respond not by supplying new product-centric innovations that organizations believe consumers want, but by offering the personalized products and services that satisfy those consumers' demands. To develop these new products and services, life sciences companies must invest strategically and differentially, not only in disruptive technologies, but also in data and algorithms, as well as customer engagement capabilities that maximize individual health outcomes. Indeed, to achieve significant improvements in outcomes, companies must unlock the power of diverse data streams that reside outside the traditional health ecosystem.

The new value equation frames innovation in terms of outcomes and personalization, meaning products are no longer the central driver of value. Success requires the adoption of flexible business models that allow life sciences companies to leverage data to develop systems that align objectives and share value among stakeholders.

Underpinning this equation is the concept of the "platform" based business model. Platforms are interfaces that connect different stakeholders in order to combine and share data easily and securely to deliver a shared goal: improved health outcomes. The Health Outcomes Platform, which will be explored in this paper, is a prime example of such a platform as well as Life Sciences 4.0.

Figure 2: The new equation for delivering value





Section:

1

Releasing the brakes



Many thinkers have discussed the value of outcomes-based contracting. This paper aims to address a different need: discuss what is currently stopping the adoption of OBCs at scale and the need for infrastructure to enable their sustainable creation. We believe the creation of an industry platform that allows seamless and secure sharing of data is essential to achieving "triple wins."

At a macro level, stakeholders have three concerns that have slowed the adoption of outcomes-based contracts. These are:

1. OBCs are too risky.
2. OBCs are too complex to measure.
3. OBCs are too difficult to contract for.

The key beliefs are outlined in Figure 3, along with the frictions causing them and the consequences. What is important is that the right industry platform, designed and run in the right way, can help overcome these issues and most, importantly, manage the risk while minimizing the administrative burden for all involved.

Figure 3: Key consequences of the market frictions



These concerns were historically valid. However, three things are different now. First, data is growing exponentially, driven by digital technologies that enable us to track, capture and measure things we previously didn't think were possible. For example, sensors in pills can help track drug adherence in schizophrenics, a smart algorithm can diagnose diabetic retinopathy without physician assistance, and the latest version of certain smart watches contain sensors that expand the device's function from fitness into care management.

Secondly, there is no shortage of computational power and data storage to handle and manage this data in a secure, scalable and low cost way.

Finally, market needs and dynamics are driving the pace of change.

Health care systems across the world are at breaking point and new solutions are needed. This is driving far greater openness and a willingness for stakeholders to share data, work together and test new models. In this dynamic environment, forward-thinking leaders empowered with the right tools are required. Enter the Health Outcomes Platform.

Key questions

▶ **Is it better to build your own or be a participant?**

Be a participant. The bottom line for platforms is scale in the form of users. The more users, the more data; the more data the better the insight and points of "exchange," the more powerful the platform is. We believe one company alone would not achieve the level of adoption or be prepared to invest the amount to get a platform to a scale where it is sustainable.

▶ **Will providers be prepared to share the data required?**

In short, yes. The world is changing – we now live in the interconnected, sharing economy. Sharing health care data so that multiple parties can analyze it is what is going to transform health care for the better. In response to this, policies are changing. Safe mechanisms for sharing data, such as secure application programming interfaces (APIs) (designed so the "data never moves") and blockchain, supported by clear General Data Protection Regulation (GDPR) guidelines is making sharing increasingly viable and easier.

▶ **How can we create a competitive advantage for our company if it is an industry platform that everyone is using?**

It's what you do with it that counts. True competitive advantage comes from being bold, selecting the outcomes that matter and then delivering a service strategy that outperforms your competitors on those outcomes. The platform is a means to an end and massively simplifies and reduces the cost of doing business for all.



Section:

2

Enter the platform



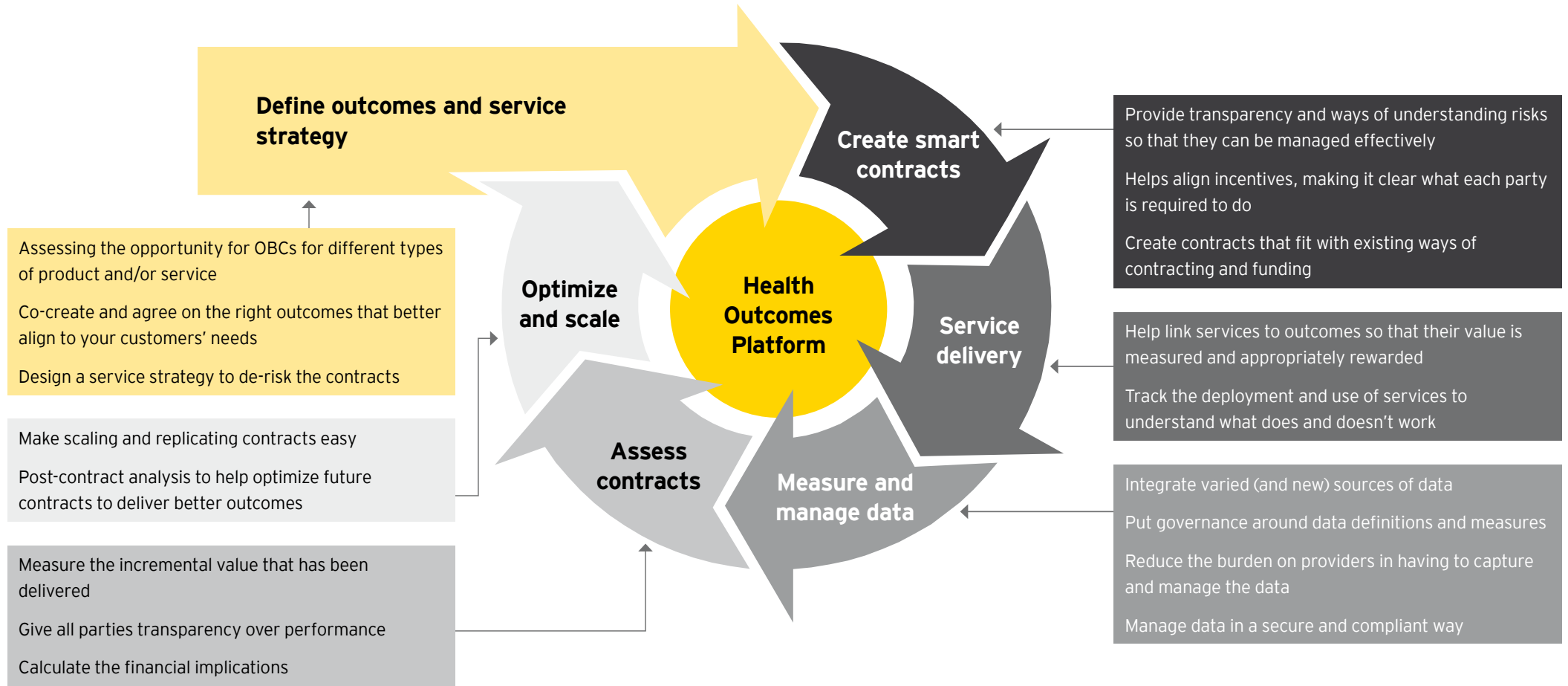
In today's hyper-connected, on-demand world, platforms have disrupted businesses in many different industries. They have changed the way we shop, the way we travel, even the way we bank. Platforms in mobility, consumer and financial sectors have a number of commonalities. They are convenient, prioritize the user experience and drive profitability by eliminating known friction points. In health care, platforms are a means to connect highly disparate stakeholders. They offer some unique advantages that make it possible to scale the delivery of improved outcomes. These include:

- ▶ Helping connect stakeholders, data and resources and recombine these to add value in new ways that previously were not possible
- ▶ Simplifying and enhancing the user experience
- ▶ Providing transparency and immediate and regular feedback loops
- ▶ Providing a mechanism for companies to innovate faster by enhancing agility
- ▶ Streamlining data integration and management, eliminating costly overhead and reducing running costs
- ▶ Platform economics mean there is almost zero marginal cost of additional users; one patient or one thousand – it doesn't make a difference
- ▶ Creating virtuous circles – more users creates more insight, which drives ever more connections and users

Currently, there is no single platform that allows parties to come together to deliver better patient outcomes. Ultimately, the HOP is designed to streamline one important piece of the process: the end-to-end process for setting up, managing and assessing outcomes-based contracts. It is designed to overcome the challenges set out in section one at each step of the way (See figure 4).



Figure 4: The ways in which platforms remove friction



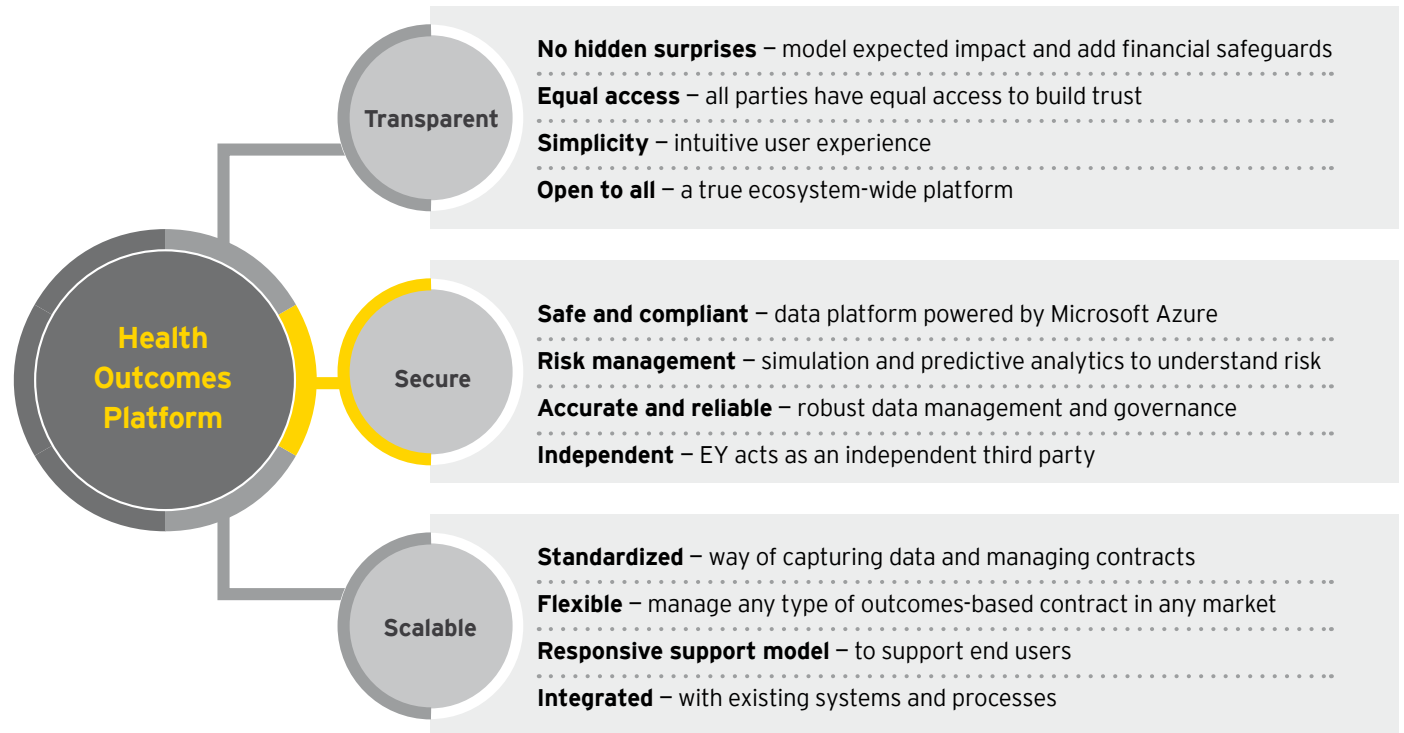
The platform works because it is based on three key design principles – transparency, security and scalability.

Transparency for all parties involved in a contract is critical to building trust and gives them the confidence to explore and pursue these innovative ways of contracting.

Security has two dimensions – data privacy and risk. When it comes to managing sensitive patient data, each party needs to ensure it is done so in a fully compliant way. Mistakes here end up as newspaper headlines, so a zero risk approach is required. To help with this risk, using anonymized and, where possible, aggregated data is preferred. The second dimension of security is to not land any party with an unmanageable or unforeseen commercial risk. By their very nature, these types of contracts are more risky but that is not a downside as risk often leads to attractive rewards for all. Security here enables parties to go into any agreement with their eyes open.

Finally, **scalability** is critical. It is time to move beyond pilots and start to drive system-wide value at scale. Scalability is about reducing the cost and complexity of managing these contracts and providing a solution that works for any company, product and market. Figure 5 summarizes these three important principles in more detail.

Figure 5: Key principles of a sustainable solution



Section:

3

EY's Health Outcomes Platform



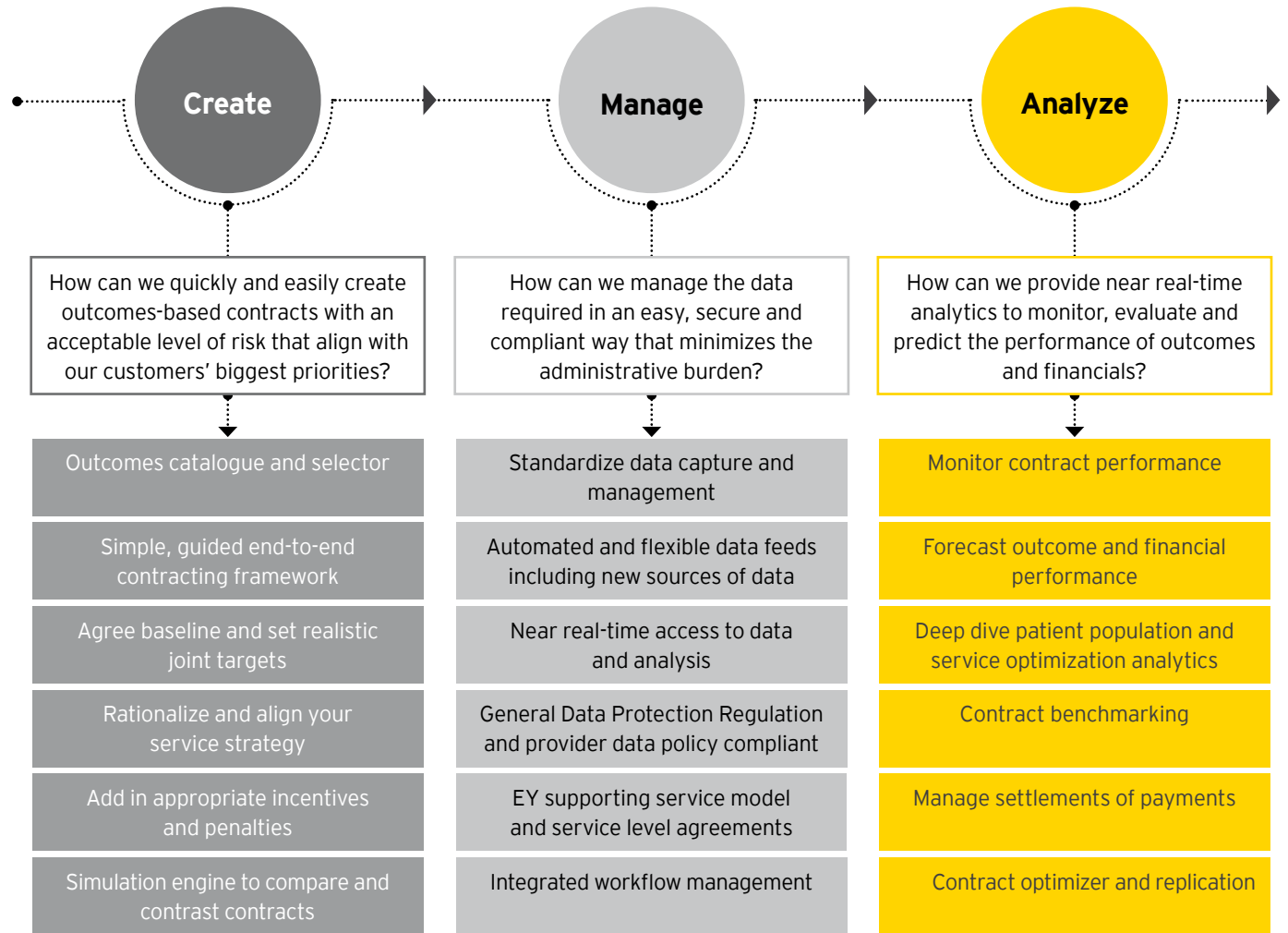
In this section we dive deeper into the EY Health Outcomes Platform's specific value proposition. The platform is designed to enable the key steps of setting up, managing, analyzing and assessing outcomes-based contracts (Figure 6).

At the creation stage, the platform provides a structured way to quickly and easily create OBCs with an acceptable level of risk and move to outcomes-based shared value for all stakeholders. Importantly, it creates binding contracts where all parties are required to play a part which makes it true risk sharing. When creating contracts, this is where the opportunity lies to craft compelling value propositions and really differentiate a product or service from its competitors. For example, in cardiovascular looking at a longer-term contract that reduces stroke rate through better diagnosis to unlock downstream cost saving benefits. Outcomes contracts won't be right or necessary for every product but those conditions that face significant clinical, economic and humanistic challenges will be very attractive.

Management of the underlying data that demonstrate the health outcome is also critical. To adequately assess a real world impact, parties must be able to aggregate data from a range of sources in an easy, secure and compliant way that minimizes, if not eliminates, the administrative burden for all involved.

Finally, OBCs need to be analyzed, monitored and assessed. Performance needs to be tracked so that the right interventions can be made to maximize outcomes for the benefit of all. A set of dashboards provide near real-time analytics to monitor, evaluate and predict the performance of outcomes and financials relating to the contract.

Figure 6: What EY's Health Outcomes Platform provides



What makes EY's platform unique?

Our purpose is to help build a better working world and this solution is very much focused on this. We believe our solution provides some key differentiators at each stage of the three key steps of creating, managing and analyzing outcomes-based contracts:

1. **The first practical, end-to-end approach to help create "triple win" contracts – we help you understand risk and impact and move forward at pace through:**
 - ▶ An OBC attractiveness assessment tool to evaluate and understand the business case for your products
 - ▶ Strong relationships with health care providers and payers to kick-start partnerships
 - ▶ An "outcomes selector" tool which helps users select the right outcomes from a large database of clinical, economic and humanistic outcomes across all major therapy areas
 - ▶ Health economic modeling to calculate expected benefits to inform contract targets
 - ▶ Service design capability to design low-cost solutions to de-risk outcomes
 - ▶ Legal support to help create commercially sound and compliant contracts
 - ▶ Negotiation preparation through modeling and scenario analysis of revenue impact

2. **A platform, accelerators and partners to support data management – we help "connect the dots" across the ecosystem to simplify and streamline data capture and management by:**

- ▶ Working with companies who are already established in health care systems and have access to data such as Zesty, Umotif, Orion Health and BeWell.
- ▶ Deep understanding of the data governance and architecture of health care systems in the top twenty global markets
- ▶ A robust and flexible underlying data model and structured supported by APIs to access data but ensure the "data never moves"
- ▶ A fully secure and compliant platform built on Microsoft Azure and designed with cyber security in mind

3. **A strong heritage as a trusted, independent audit firm to support contract performance analysis:**

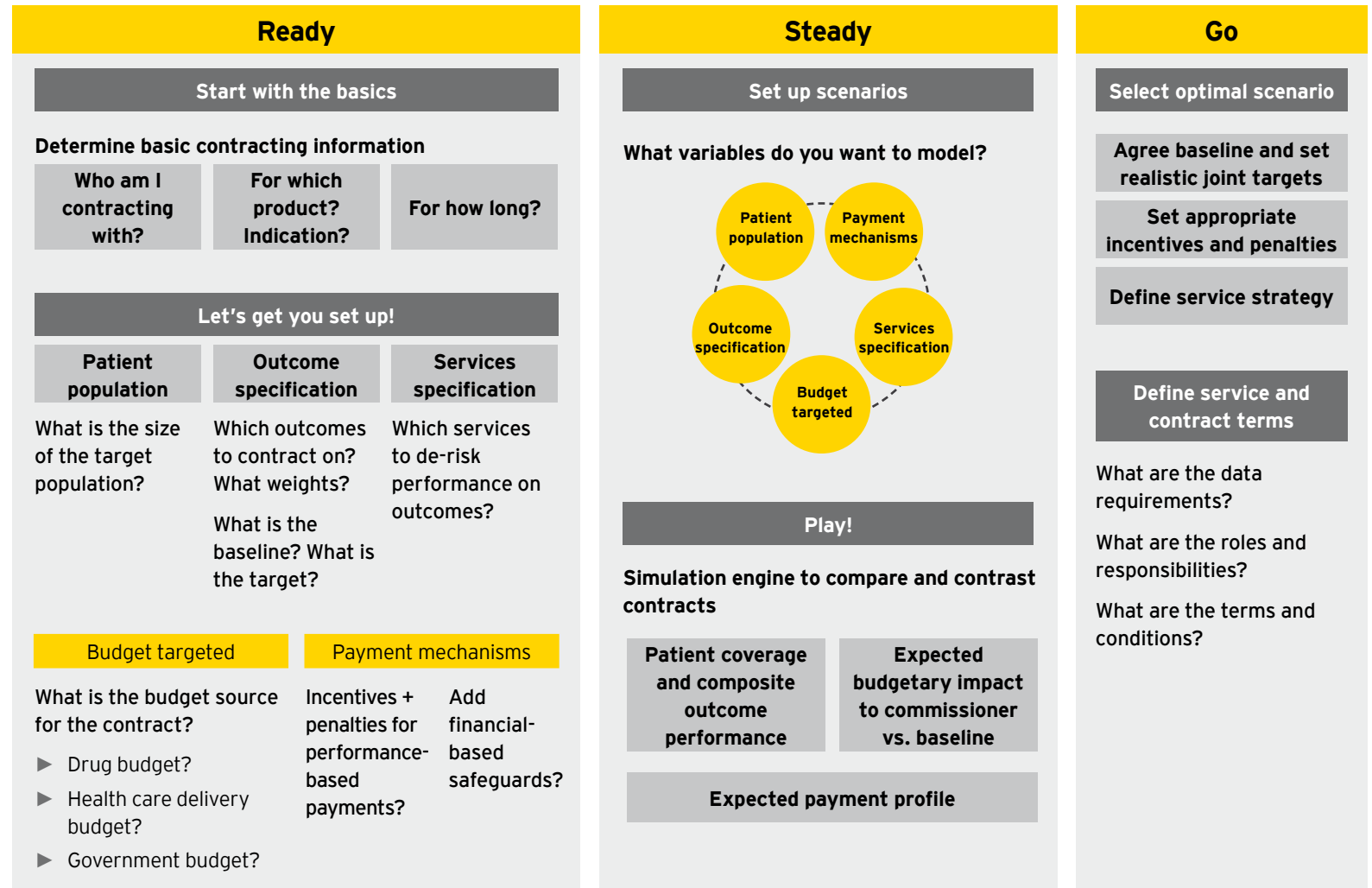
- ▶ We have been analyzing businesses and their transactions for over one hundred years and giving markets confidence in the process. Rigorous and reliable analysis that can be depended upon and trusted
- ▶ Predictive analytics algorithms to forecast and understand expected performance
- ▶ Dashboards that have been designed and co-created with key stakeholders



Create

In order to successfully move the industry toward OBC, there is a need for a structured and consistent approach to creating contracts. The right preparation is crucial: from selecting the right payer and the right target population to correctly identifying outcomes, services to de-risk those outcomes, budget to be targeted and payment mechanisms and safeguards. Once set up, the Health Outcomes Platform allows you to play with those variables to assess the level of risk associated with OBC based on different scenarios. It also provides a first view on expected impact on revenue for the life sciences company and spend for the payer or provider. This part of the platform really prepares both parties for negotiations by providing the necessary analysis, modeling the impacts and risks, and the structure to allow positive and fruitful negotiations.

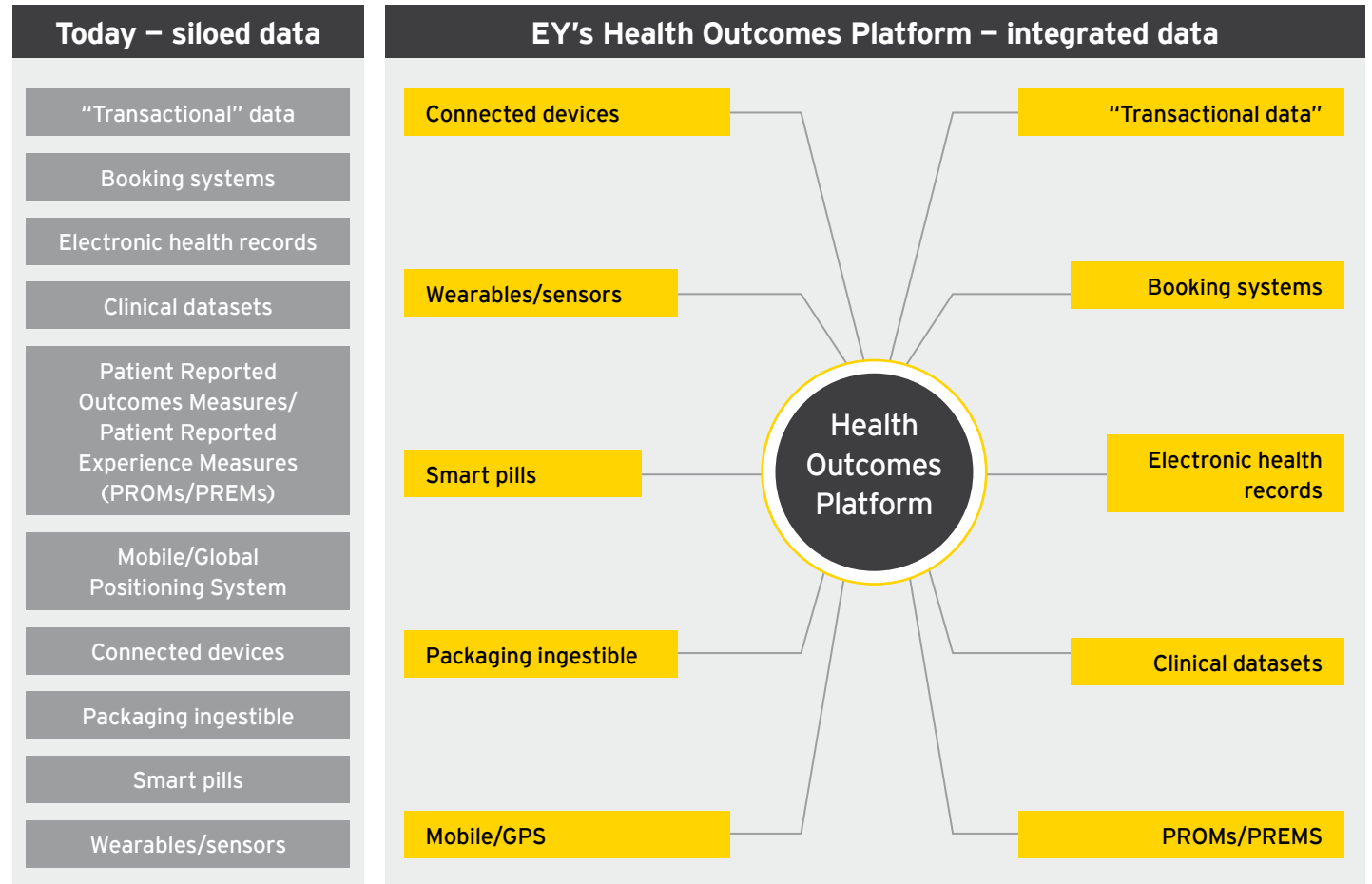
Figure 7: Ready, steady, go! The contract set up journey built into the EY's Health Outcomes Platform



Manage

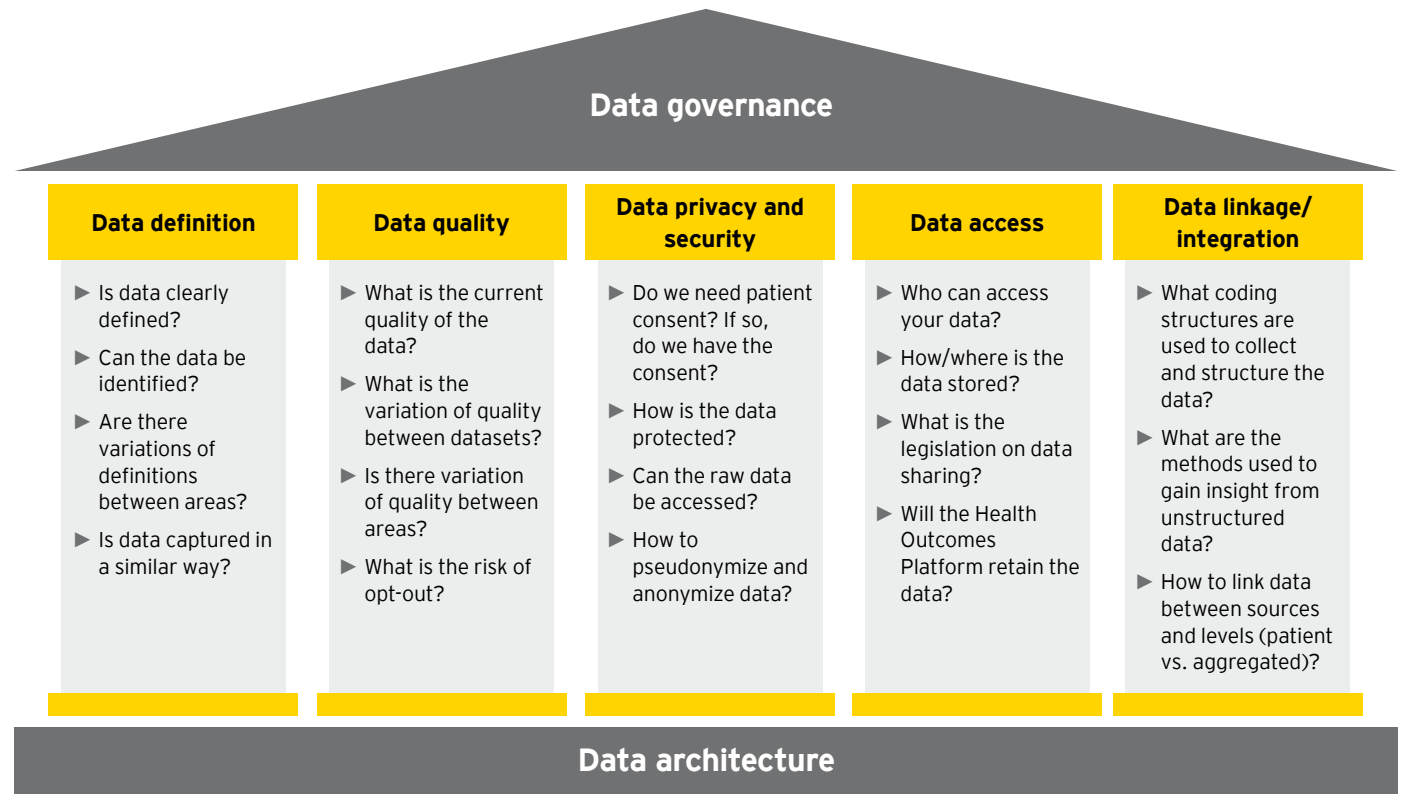
One of the key aims of the HOP is to take a much broader view of outcomes – moving beyond purely clinical outcomes to consider economic, performance and humanistic ones as well. As the diversity and number of data sources continues to grow (see Figure 8), the HOP provides the platform to integrate, structure and govern all this data, moving from the siloes it resides in today.

Figure 8: Integrating new and diverse datasets



Once the source of data required to capture a particular outcome has been identified, one of the biggest challenges is to then get the right data governance and architecture in place. Due to differences in legislation and processes to capture, store and manage data sources, this needs to be tailored to each market. The Health Outcomes Platform not only integrates these different siloes of data from across pathways, organizations and stakeholders into one single platform to form longitudinal datasets but also manages five essential elements of data governance. It provides very structured process tools (APIs, data models, data mapping structures, etc.) and accelerators to identify, define and access the data required, assess the quality and use it in a secure and compliant way (see Figure 9).

Figure 9: Putting the right data governance in place



Assess

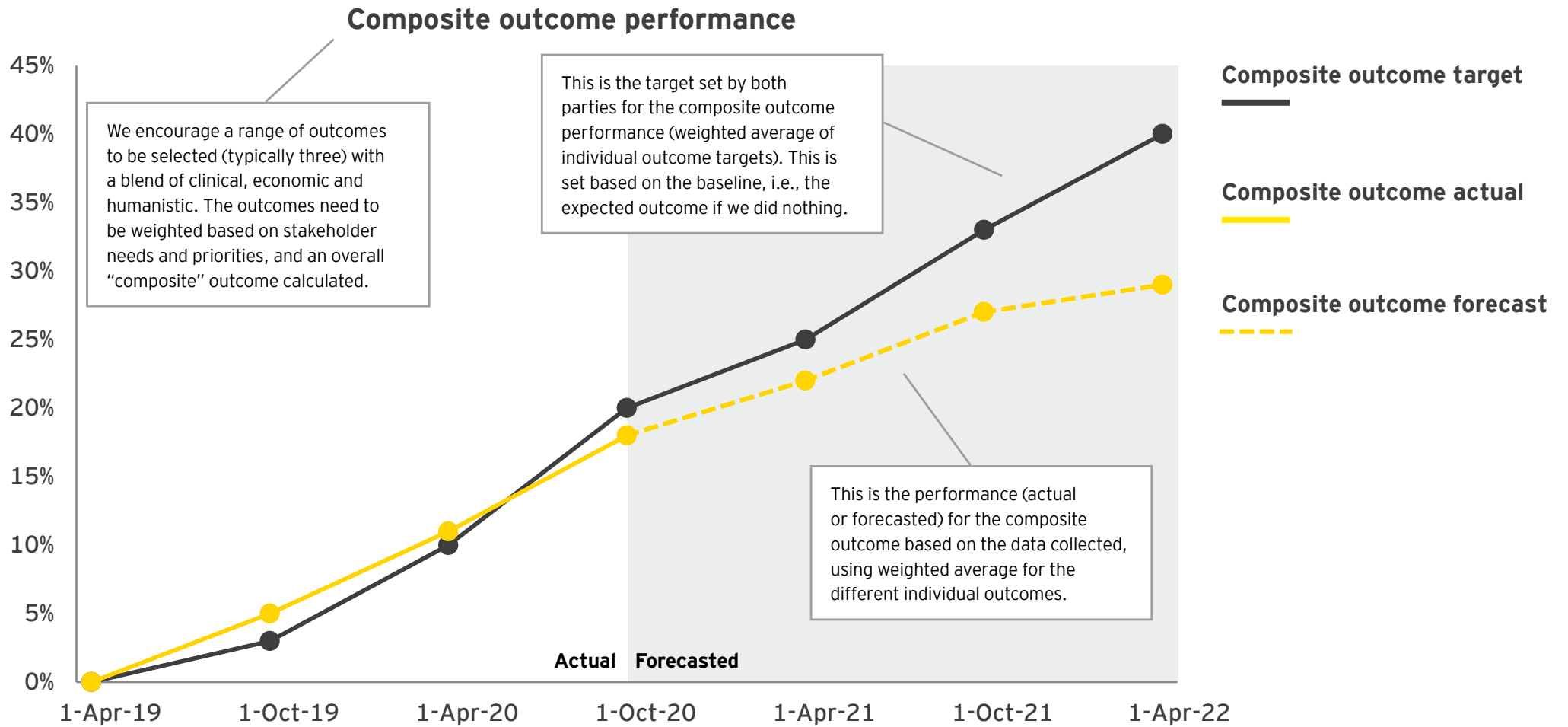
Finally, perhaps the most important element of the platform is the ability for all parties to analyze performance in a transparent and trusted way. Ultimately, parties need to understand and agree on the outcome performance in order to agree the required payment. The Health Outcomes Platform not only monitors the contract performance but also provides a forecast of outcomes and financial performance to alert all parties to potential poor performance (i.e., not hitting the desired outcomes targets) and thus take action. All parties have equal access to the data to ensure transparency needed to help build trust and a sustainable partnership.

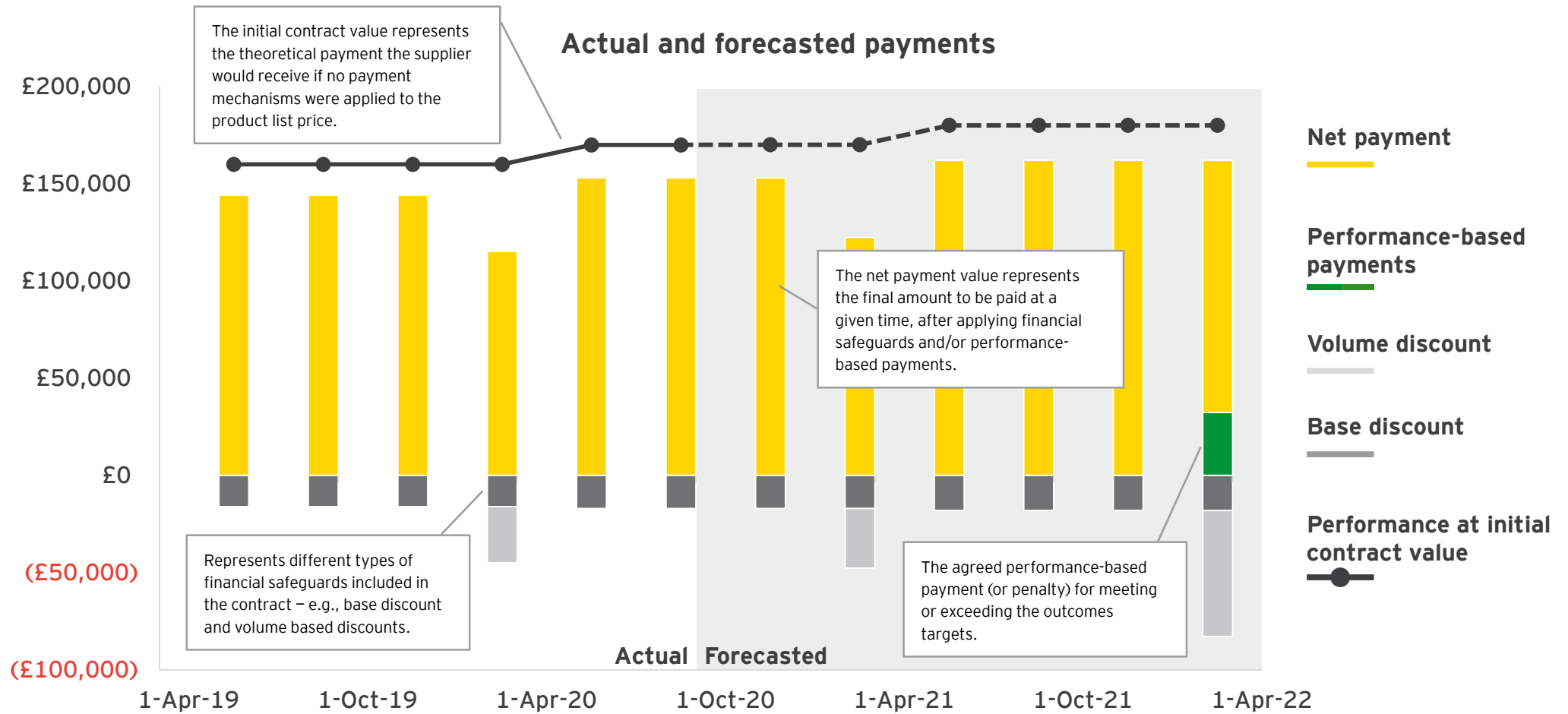
User friendly dashboards provide each party with all the information they need to understand performance in near real-time. They can see the baseline performance, the agreed target, actual performance, including any variances, and forecasted performance. It also provides two additional pieces of valuable analysis:

- ▶ The first is the ability to analyze the patient populations to understand outcome performance at a more granular level – for example do men under the age of 40 perform worse on certain outcomes? The second is service usage so that stakeholders can track the impact of services on outcomes. This can often be challenging but, with enough scale in terms of patients, we can analyze groups of similar patients and whether service usage correlates to better outcomes.
- ▶ Ultimately this data is used to generate a real-time picture of the contract's financial performance, including the actual and forecasted spend for payers or providers and the revenue for life sciences companies. A detailed breakdown of payments, including both performance-based payments and financial safeguards, is also provided for maximum transparency. Finally, the contract optimizer provides insights on contract performance and areas of improvement to help scale and replicate successful outcomes-based contracts nationally and globally.



Figure 10: Example performance and financial analysis charts







Conclusion – be a “game changer.”

The world has enough followers

EY’s Health Outcomes Platform can help unlock outcomes-based contracting at scale for the benefit of all. The beauty of our platform is that it takes something very complicated and uncertain (the management and sharing of data) and simplifies the process, providing the essential ingredients to manage and reduce the risk. By arming each party with the information required for success, we not only provide real-time transparency but foster an environment of trust that is essential for long-term shared value creation.

This is new territory for health care and life sciences companies and finding the right path won’t be without effort or risk. But purpose and leadership are key. As Henry Ford once said, “whether you think you can, or think you can’t – you’re right.” For those with the ambition and boldness to “think they can,” the opportunity to really do something special and have a demonstrable impact on patient lives is significant.

Authors

Aaron Bean

Director, Life Sciences
Ernst & Young LLP
Phone: +44 20 7951 9731
Email: abean1@uk.ey.com

Alice Blezat

Senior Manager, Life Sciences
Ernst & Young LLP
Phone: +44 20 7951 8226
Email: ablezat@uk.ey.com

Key contributors

Pamela Spence

Principal, Life Sciences
Ernst & Young LLP
Phone: +44 20 7951 3523
Email: pspence2@uk.ey.com
Twitter: @PamelaSpence_EY

Daniel Mathews

Principal, Life Sciences
Ernst & Young LLP
Phone: +44 20 7197 9375
Email: dmathews1@uk.ey.com

Susan Garfield

Principal, Life Sciences
Ernst & Young LLP
Phone: +1 617 374 6209
Email: susan.garfield@ey.com

Sasha Richardson

Executive Director, Life Sciences
Ernst & Young LLP
Phone: +1 212 360 9212
Email: sasha.richardson@ey.com

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

How EY's Global Life Sciences Sector can help your business

As populations age and chronic diseases become commonplace, health care will take an ever larger share of GDP. Scientific progress, augmented intelligence and a more empowered patient are driving changes in the delivery of health care to a personalized experience that demands health outcomes as the core metric. This is causing a power shift among traditional stakeholder groups, with new entrants (often not driven by profit) disrupting incumbents. Innovation, productivity and access to patients remain the industry's biggest challenges. These trends challenge the capital strategy of every link in the life sciences value chain, from R&D and product supply to product launch and patient-centric operating models.

Our Global Life Sciences Sector brings together a worldwide network of nearly 17,000 sector-focused professionals to anticipate trends, identify their implications and help our clients create competitive advantage. We can help you navigate your way forward and achieve sustainable success in the new health-outcomes-driven ecosystem.

EYG No. 011836-18Gbl

© 2018 EYGM Limited.

All Rights Reserved.

EY-000076129.indd (UK) 10/18. Artwork by Creative Services Group London.

ED None



In line with EY's commitment to minimize its impact on the environment, this document has been printed on paper with a high recycled content.

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax or other professional advice. Please refer to your advisors for specific advice.