ISG™ imagine your future®

Driving Greater Return on Engineering Services Investment

Dave Tienstra, Partner

INTRODUCTION

The rapid growth of the Digital Economy means the adoption of emerging technologies and the demand for digitalization will continue to accelerate. This has created tremendous pressure for enterprises to optimize the way they develop, test and deploy new products and to decrease the time it takes to get new products or product enhancements to market. Enterprises that are adaptable and open to new ways of doing business will compete the most effectively. For many, this will mean pivoting the service delivery model and implementing a more strategic sourcing strategy.

To help meet changing product and product-support demands, businesses will need to expand their relationship with engineering services providers, which have traditionally been used for tactical and short-term projects, and engage with them as strategic partners. According to ISG research, the demand for engineering services will double in the next decade. This white paper explores how and why the engineering services sourcing model is shifting from tactical to strategic and what enterprises have to gain from it.

THE INCREASING DEMAND FOR ENGINEERING SERVICES

Sensors, analytics and mobile technologies are affecting almost every aspect of the enterprise. Take, for example, an aircraft engine, which has 10 times the number of sensors it had just eight years ago. These sensors are used to relay to ground stations thousands of data points per second throughout the entire flight of an aircraft. Ground-based analytical systems can, on a continuous basis, review data for anomalies, detect inconsistencies and pinpoint changes that might signal a malfunctioning or underperforming component. When ground crews at the next airport or hub are alerted to be on the ready to make component changes once the aircraft lands, the airline experiences greater availability of aircraft, reduced operational disruption, increased efficiency and, ultimately, a lower cost of operations.

The effects of digitalization know no industry boundaries. Insurance companies are moving toward a usage-based model whereby they track and measure driving behavior with the use of automobile-embedded sensors. By better understanding the driving patterns of their customers, insurers can reward those they deem to be safe drivers by lowering premiums up to 30 percent and incent risky drivers to improve their driving or face higher premiums as a nudge to consider another carrier.

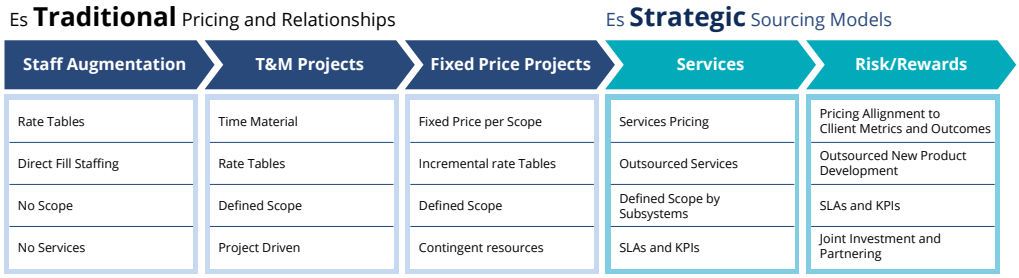
The desire for risk mitigation is driving innovation around the world.

According to The Wall Street Journal, a mile driven at 2 a.m. is four to five times riskier than a mile driven at 7 a.m. Drivers who slam on the brakes more than eight times every 500 miles are 73 percent more likely to get into an accident. Gathering and analyzing this kind of data feeds a new business model that insurance companies can use to build customer-specific services and products and mitigate their own risk. This desire for risk mitigation is driving innovation not only in the insurance and airline industries, but in almost every industry around the world. Today, that innovation is coming more and more from a marketplace led by engineering services providers that offer new kinds of product and services value.

TRADITIONAL ENGINEERING SERVICES SOURCING

Many enterprises have long relied on engineering services providers to develop, test and deliver technologies that enhance their products on a project-by-project basis. Today, the majority of engineering services relationships are based on pricing models, as depicted in Figure 1 below. The three columns on the left demonstrate the high concentration of current engineering services relationships that employ rate-based staff augmentation, time and materials (T&M) and fixed-price project agreements. The two columns on the right—the strategic sourcing agreements that use services-based and risk/reward structured pricing—represent a much lower percentage of today's engineering services relationships. Both strategic sourcing services and risk/reward pricing models are designed to deliver greater value to the marketplace by developing new options for service delivery, providing the ability to scale to meet ever-increasing demand for service, and creating greater agility to pivot to innovative solutions.

Evolution and Maturity of Engineering Services Outsourcing Pricing Models and Relationships (Figure 1)



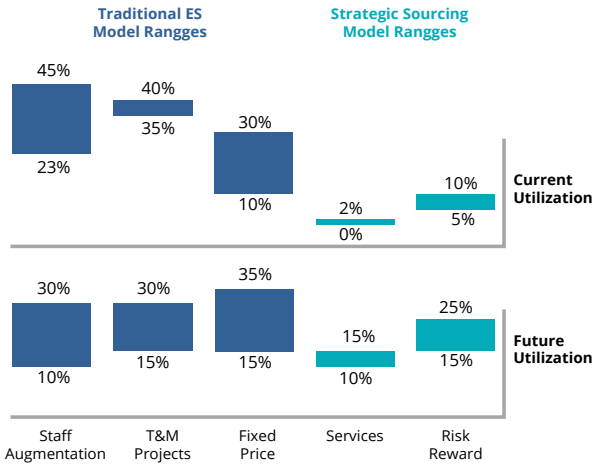
Engineering services are increasingly critical to achieving the highest return on investment.

The tidal wave of demand for increasingly sophisticated products and processes means enterprises will need to rely more and more on engineering services and will find those services increasingly critical to achieving the highest return from their investments in these areas. The increased reliance on engineering services will require a shift from the traditional rate-based, short-term model structures to services-based agreements and buy-side enterprise/service provider partnerships. Partnerships of this nature have shown to better support joint investments for achieving the value of product enhancements and innovation. The continued expansion of service provider capabilities will give enterprises entire new service delivery options.

Strategic sourcing relationships structured to create greater innovation and product enhancements with shorter lead times will far outperform traditional T&M sourcing relationships, which are not structured to provide continuous market enhancements or meet the demands of the marketplace. Enterprises that focus on operational excellence and continuous improvement by strategically partnering with an engineering services provider will drive 20 to 30 percent greater value in terms of return on investment. They will also increase their speed to market by 15 to 20 percent. The benefits of increased agility and speed to market on their engineering product portfolios will be critical to success over the long term.

Figure 2 below shows the shift from the current ranges of use of traditional rate-based, short-term engineering sourcing models to the use of strategic sourcing models by 2020.

The Shift in Percentage of ES Sourcing Models Utilized (Figure 2)



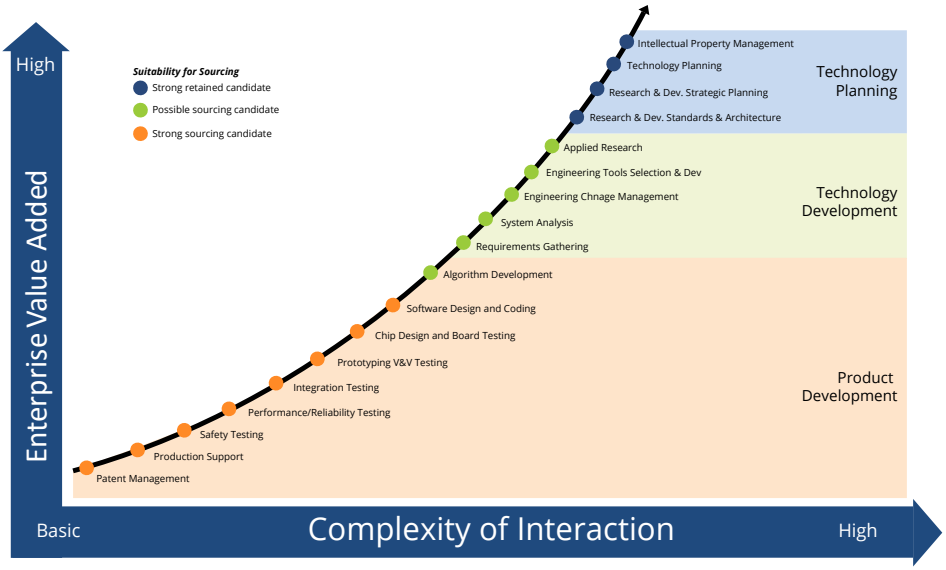
WHAT DOES THE ENGINEERING SERVICES SOURCING SHIFT LOOK LIKE?

Engineering services now is about speed over cost.

In today's market, engineering services is about speed over cost. The change to the sourcing model begins by assessing a provider's ability to help an enterprise meet business demand, drive greater innovation and value, increase speed to market and improve operational efficiency. Developing a service delivery model that can adapt quickly to a changing marketplace, withstand competitive pressures and introduce new product innovation will be the keys to success.

To get the most out of a strategic sourcing relationship, an enterprise must determine the right mix of functions to source. It must then map the list against the service provider's capabilities, strengths, depth, vertical expertise, scale, global footprint and value propositions to determine whether the provider can meet the objectives of those functions. As illustrated in Figure 3 below, nearly 70 percent of functions in an engineering services operating model can be sourced. The more an enterprise sources, the more critical it becomes to do so with an outcome-based, strategic sourcing model. The enterprise derives scale by shifting the responsibility of delivery to an experienced engineering services provider while retaining the most strategic functions, including intellectual property management, research and development standards, program management, product requirements and architecture design, migration and porting.

ES Sourcing Suitability for Electronics, Embedded & Software Products
(Figure 3)



A NEW WAY OF DOING BUSINESS

The shift from traditional to strategic engineering services sourcing is expected to generate at least a 20 to 30 percent increase in return on investment for an organization. The increased return comes from a combination of operational excellence improvements, including increased scalability, improved productivity and lower costs, and product and services value enhancements, including advanced functions and features, agility in the development process, continuous product improvement and a 15 to 20 percent increase in speed to market

Model choice increase **Speed to Market** 15 to **20%**

This paradigm shift will rely on engineering service providers that can offer the resource expertise and talent needed to efficiently deliver services. They will need to bring tools, best practices and the real-world skills to bear on enterprise business challenges. In this next evolution of engineering sourcing, enterprises will no longer see service providers as vendors but as strategic partners. By moving away from the rate-based, short-term sourcing models and creating deeper and more mature relationships, enterprises will position themselves to better respond to ever-changing customer and business demands.

ABOUT THE AUTHOR

DRIVING GREATER RETURN ON ENGINEERING SERVICES INVESTMENT

Published February 18, 2016

DAVE TIENSTRA

Partner

Dave works with enterprises across industries to increase margins by assisting them along their digital journey. He helps companies address their challenges and create competitive advantage through revised strategies, creative business models and technological innovation. Dave and his team use a collaborative process methodology to help clients achieve the optimal combination of cost efficiency, improved service delivery and innovation for their business requirements. Dave most recently helped an aerospace and defense contractor design and execute a digital transformation to achieve its business objectives.

ISG™

imagine your future®

ABOUT ISG

ISG (Information Services Group) (NASDAQ: III) is a leading global technology research and advisory firm. A trusted business partner to more than 700 clients, including 75 of the top 100 enterprises in the world, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; technology strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data. For more information, visit www.isg-one.com.

Let's connect NOW...

ISG™

imagine your future®

