

Operations Practice

# Managing your external supply system for innovation

To accelerate innovation, more companies are turning to outsiders for help—especially their suppliers. Getting supplier innovation to work means rethinking incentives, relationships, and management.

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**When it comes to innovation**, there's too much to do and too little time to act. Across sectors, companies are experiencing a significant rise in demand for innovative products and services. Customers want products that perform better, offer new features, and are thoroughly tailored to their individual needs. As a result, product lifecycles are shrinking, while complexity increases. Meanwhile, novel and disruptive business models are radically changing the capabilities and technologies companies need to compete. Globalization exacerbates these challenges, creating the need for products and variants that comply with different local regulations and meet specific local market requirements.

Then there are the technical difficulties. Bringing an innovative idea to market may require mastery of entirely new fields: even relatively simple products now incorporate electronics, software, and digital services. In most sectors, major players must manage innovation across several competing or complementary technology types. For example, automotive companies need internal combustion engine, electric, and hybrid powertrains in their development pipelines; and they must transform many of their longstanding hardware-oriented R&D processes into agile software-development capabilities.

Even companies with the appetite to address innovation challenges on their own may struggle to marshal resources. Executives report that rapid technological change has created talent surpluses in certain design and mechanical-engineering fields, while critical shortages remain in data analytics and software engineering.

Together, these pressures drive companies to ask their suppliers for further involvement in the innovation process and workload. As many have found, however, successful supplier innovation is difficult to do well.

### **Benefits of supplier innovation**

Supplier innovation offers much more than additional mental horsepower. Suppliers can also offer value that companies might find difficult or

impossible to generate in-house. For example, a supplier may have a significant head start in the application of a specific technology.

We find that externally sourced innovations are typically commercialized 40 percent faster than home-grown ideas, often because they have already been partly validated by the supplier. UK carmaker Aston Martin, for example, has worked with Flexsys, a US-based aerospace supplier, to develop seamless adjustable wings or fenders for its high-end models. The company's technology uses flexible materials to create components that offer better aerodynamic performance and a neater appearance than conventional designs.

Suppliers based in regional markets may have an intimate understanding of local needs, aiding the development of attractive offerings for those customers. In China, for example, a number of automotive OEMs are working with the country's big internet firms to build connected car services, such as navigation or in-vehicle e-commerce. Through its partnership with Alibaba, SAIC has launched several connected car models which include features such as smart-voice recognition, and the ability to buy fuel or parking using the Alipay online-payments system. Other European manufacturers have also integrated services from major Chinese internet companies into their Chinese-market vehicles.

Supplier innovation can create entirely new business opportunities. With the consent of its customers, tire maker Michelin uses remote monitoring technology to collect data on the performance and operating conditions of its products. Some of that data is made available to several third-party software companies, which in turn provide a range of value-adding services to customers, such as routing apps for truck drivers.

Working closely with a supplier from the initial development stages of an idea can unlock new opportunities to optimize costs or reduce total cost of ownership. Partners can optimize designs, sourcing footprints, and manufacturing-task allocation to make the best use of their respective capabilities. Close partnerships help projects run smoothly, with better outcomes and shorter development times,

since the parties involved spend more time solving problems and less time negotiating.

### Supplier innovation is different

Many companies already have complex, collaborative relationships with their suppliers. They may routinely outsource certain R&D activities, engage in joint cost reduction, or design optimization projects.

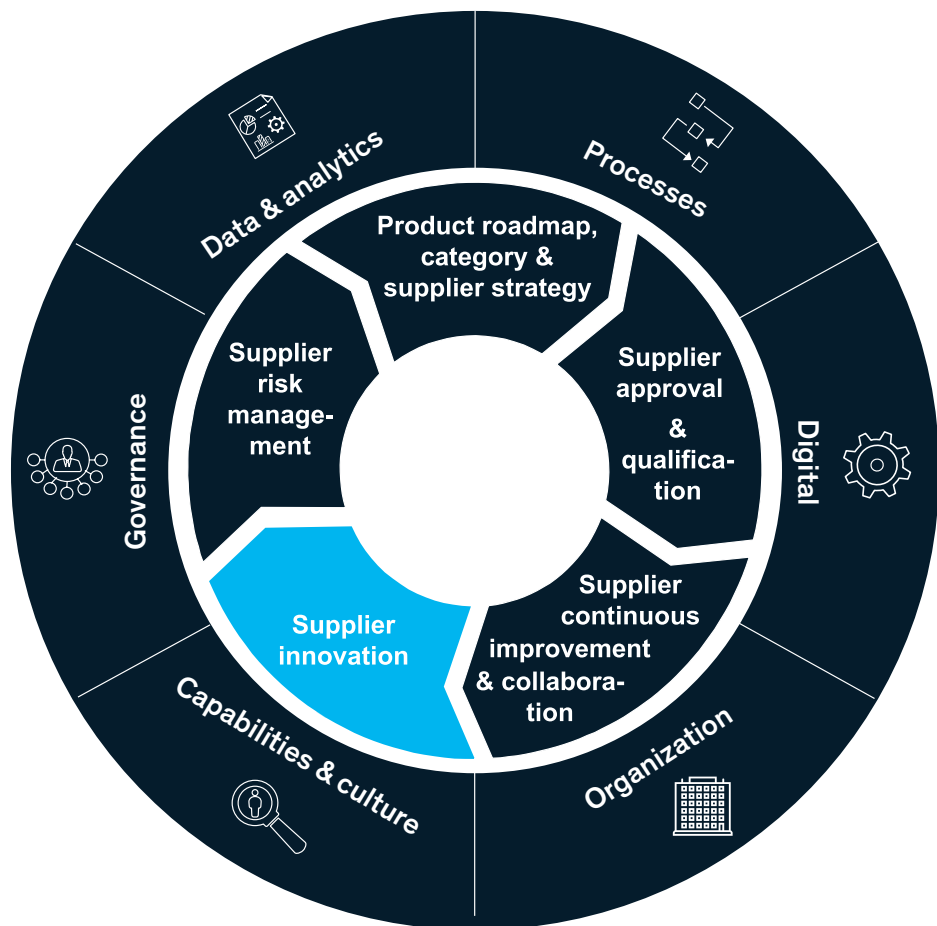
Supplier innovation is one part of an organization's overall supplier collaboration strategy (exhibit), but it requires a different kind of relationship.

What sets supplier innovation apart from these other collaboration activities is that it aims to enable entirely new sources of value. This might involve creating new products or services, finding novel ways to eliminate cost and waste (whether from products, supply chains, or manufacturing operations), or using shared data to build new types of customer offering.

*Building flexibility.* At first, this change in objective can be uncomfortable, because supplier innovation requires the involved parties to take a step into the unknown. Innovation involves a balance of risks and rewards that don't always fit neatly

Exhibit

**Supplier innovation is a critical component of supplier collaboration.**



into the transactional frameworks that define most customer-supplier interactions. Instead, successful projects require a partnership between participants.

Such partnerships can take many forms, from loose collaborations to formal alliances, joint ventures, minority investments, or even full acquisitions. Once started, supplier collaboration can evolve almost imperceptibly into supplier innovation, where joint efforts to refine a component may lead to the generation of entirely new design ideas.

Similarly, supplier innovation can lead to different outcomes. Some supplier-innovation efforts are transient, focusing only on a specific problem or opportunity. Others may evolve into life-long relationships between organizations. Participants may agree to share all the intellectual property generated in a project, or only part of it.

**Building trust.** The second challenge in supplier innovation is trust. Used to tough negotiations and occasionally adversarial relationships, both buyers and suppliers can find it difficult to move to a closer, more open way of working. The buyer may be concerned about revealing too much about its own innovation capabilities and priorities, or about letting the supplier know the business significance of their offerings. The supplier may be reluctant to give away details of its own costs and capabilities, lest they be used against it in future negotiations. Or it may mistrust the buyer's strategic interest, fearing exploitation. Each side may worry about the other's level of commitment to the project, or the value they will bring to the table.

## Assembling a supplier innovation engine

Companies need a systematic approach to make a success of supplier innovation. It should address four major considerations:

1. Strategic prioritization: In which product, technology, or process areas should we innovate with suppliers?
2. Partner selection: Who should be our innovation partners?
3. Alignment: What are the incentives for both partners? How will we manage the risks?
4. Infrastructure and governance: How will projects be executed and managed?

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Companies no longer need to make the tradeoff between quality and speed when allocating assets to their field force. The new asset-optimization solution provides the best of both worlds through simple, adaptable mathematical formulation and nevertheless incorporates practical business constraints. With asset allocation that is both smarter and faster, companies can aggressively roll out and support new physical assets while maintaining low operating costs.

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