

Open Innovation: systematically integrating external knowledge into development and procurement

Open Innovation refers to the deliberate opening of innovation processes across company boundaries by systematically incorporating external knowledge. In an industrial context, this mainly concerns collaboration with suppliers, research institutions and manufacturing partners. This gives procurement professionals an expanded role: they identify suitable partners, manage the knowledge transfer and secure contracts to ensure that joint ideas result in marketable products.

Key facts

- Open Innovation combines inside-out and outside-in flows: companies share knowledge externally and integrate external knowledge into their own development.
- In practice, suppliers are considered one of the most important external sources of innovation, especially in technically demanding manufacturing areas.
- Within the procurement process, Open Innovation connects classic instruments such as the sourcing strategy and Source-to-Contract (S2C) with partnerships on an equal footing.
- Typical implementation formats include supplier idea competitions, joint development projects, innovation workshops and technology scouting.
- Success is frequently measured using KPIs such as the share of joint developments, time-to-market reductions and contributions to the savings pipeline.
- Intellectual property rights, confidentiality and export control require contractual and procedural frameworks to be clarified at an early stage.

Definition: Open Innovation

Open Innovation is a management approach in which companies deliberately open their innovation processes to external actors and make internal resources available externally. The term was coined in the early 2000s and marks the departure from the closed research model, in which all development work is carried out exclusively in-house.

Inside-Out and Outside-In

Outside-In describes the flow of external knowledge into the company, for example when suppliers contribute solution approaches for materials or manufacturing processes. Inside-Out refers to the exploitation of a company's own knowledge by third parties, for example through licences or spin-offs. In practice, outside-in forms dominate because the direct competitive advantage is measurable.

Distinction from classic supplier management

While classic supplier management focuses on specifications, prices and deadlines, Open Innovation aims at an earlier intervention in product creation. The difference shows in the role: the supplier

becomes a development partner rather than a contract manufacturer, which raises the requirements for trust, contracts and quality assurance.

Relevance for procurement

Procurement is usually the gateway to external technologies because it already maintains usable contacts with manufacturers, research institutes and contract manufacturers. It can identify innovation potential in existing suppliers, for example via the Approved Vendor List (AVL), and deliberately qualify new partners for development projects.

Methods and procedure in the procurement process

Open Innovation succeeds when it is integrated into established processes rather than existing as an isolated project. Procurement often takes on the coordination between engineering, procurement and external partners.

Technology scouting and supplier identification

The starting point is the systematic search for external solution providers: trade fairs, patent databases, university contacts and existing supplier relationships are examined for their innovation potential. Requalifying existing suppliers from pure manufacturing partners to development partners significantly expands the potential benefits.

Innovation workshops and Early Supplier Involvement

With Early Supplier Involvement, suitable suppliers are included as early as the concept phase. Typical formats are structured innovation workshops in which individual components or functions are assessed for new materials, tolerances or manufacturing routes. A prerequisite is a clear procurement policy governing which information may be shared.

Integration into S2C and framework processes

Results from innovation phases must be contractually fixed, for example via a framework agreement or call-off agreement with defined development and series milestones. The Source-to-Contract (S2C) process provides the structural framework, from the enquiry through selection to contractual commitment.

Key KPIs and measuring success

Open Innovation often only takes effect in the medium to long term and across multiple functions. KPIs must therefore reflect different levels, otherwise the topic loses support in day-to-day business.

Innovation and process metrics

Common metrics are the share of new components or processes originating from supplier initiatives, as well as the reduction in time-to-market. In practice, the number of active innovation partners and the share of evaluated supplier suggestions are also used.

Economic evaluation

Contributions to the savings pipeline show the financial effect of improvement ideas. In addition, cost avoidance amounts, material cost share per technology platform and the investment leverage achieved through jointly developed solutions are suitable indicators.

Quality and delivery metrics

Development partnerships must not jeopardise security of supply. Metrics such as service level, defect rates in production control and the Data Quality Score assessment of supplier master data help ensure that innovation projects are not pursued at the expense of operational stability.

Risks and controls in Open Innovation

Opening up processes carries risks for knowledge, quality and legal certainty. Without clear controls, there is a threat of reputational risks in procurement and considerable economic disadvantages.

Intellectual property rights, confidentiality and export control

Joint developments require unambiguous agreements on patent rights, usage rights and confidentiality. For international partners, export control obligations are added, which should be checked before the first technical exchange. These points must be legally reviewed on a case-by-case basis.

Dependencies and failure risks

Strongly integrating an innovation partner into the process creates dependencies. Countermeasures include dual-sourcing strategies, risk classes for supplier evaluation, defined safety time buffers in procurement planning and verified risk scenario planning for the failure of the partner.

Quality and reliability of external partners

New partners must meet the same standards as established ones. Proven instruments include structured supplier audits with an audit checklist, updating the Approved Vendor List (AVL) and clearly defined warranty claims in development and framework agreements.

Current developments and digital support

Open Innovation is being made more dynamic by digitalisation and new partnership models. Data, platforms and standardised exchange formats significantly lower the barriers to entry for medium-sized companies.

Data foundation and AI-supported scouting

Good data is the foundation: content enrichment and a high Data Quality Score in procurement systems make supplier capabilities visible and searchable. AI-supported tools can use this to pre-select potential innovation partners automatically.

Marketplaces and international partner search

Digital marketplaces and supplier portals significantly shorten partner identification. For cross-border projects, new requirements arise, such as correct HS classification for development samples or pre-series deliveries.

Resilience and sustainability as drivers

Sustainability and supply chain resilience are now innovation fields in their own right. Topics such as CO₂-optimised material selection, raw material sliding clauses for price hedging and alternative manufacturing processes are increasingly developed jointly with suppliers.

Typical metrics

Share of supplier-driven innovations: typically 10–25%

Share of new components or processes whose impetus came from suppliers

Time-to-market reduction: frequently 10–30%

Compared with purely internal development for comparable projects

Evaluation rate of supplier suggestions: > 90%

Share of submitted suggestions with documented feedback

Service level of innovation partners: > 98%

Delivery reliability of development partners, also in pre-series phases

Practical example

A medium-sized mechanical engineering company faced the task of reducing the weight of a component without losing stiffness. Procurement identified previously untapped engineering potential among existing structural component suppliers and, together with R&D, initiated two innovation workshops.

- Two qualified suppliers from the Approved Vendor List were brought in as development partners under a framework agreement, including clear arrangements on intellectual property rights and warranty claims.
- The best approach, a newly adapted casting process, was tested in a pilot project and subsequently transferred into a series framework agreement via Source-to-Contract (S2C).
- In parallel, a second source was established through structured requalification to avoid dependencies; an audit checklist accompanied the qualification.
- The result: approximately ten percent weight savings, a shortened development time and a demonstrable contribution to the savings pipeline through cheaper manufacturing.

Conclusion

Open Innovation shifts the lever for innovation from purely internal research to the systematic use of external knowledge, especially from suppliers. This gives procurement a strategic role far beyond price negotiations: partner identification, qualification and contractual safeguards become core tasks. The approach succeeds when it is integrated into established processes such as S2C, supplier evaluation and procurement planning. At the same time, intellectual property rights, export control and dependency risks demand clear controls. SMEs benefit in particular, because marketplaces and structured partner processes give them access to external innovation potential without major overhead.

Frequently asked questions

What does Open Innovation mean in simple terms?

Open Innovation means that a company does not only research and develop in-house, but deliberately incorporates external knowledge. Suppliers, universities or start-ups contribute ideas and technologies. In return, the company can exploit its own knowledge externally, for example through licences.

What role does procurement play in Open Innovation?

Procurement knows the capabilities of hundreds of suppliers and is therefore a natural door-opener for

external innovations. It identifies suitable partners, coordinates innovation workshops, secures contractual frameworks and integrates results into framework agreements. In doing so, it connects innovation objectives with procurement reality.

What are typical methods of Open Innovation in industry?

Typical methods include Early Supplier Involvement, supplier idea competitions, joint development projects, technology scouting and innovation workshops. These are complemented by cooperation with universities and access to digital supplier platforms. What is decisive is the contractual fixation of results, for example through framework agreements.

What are the risks of Open Innovation?

Key risks include the loss of know-how, disputes over intellectual property rights and growing supplier dependencies. Added to this are compliance requirements such as confidentiality and export control. Countermeasures include clear contracts, defined risk classes, dual sourcing and structured audits of new partners.

How is the success of Open Innovation measured?

Frequently used metrics are the share of new products or components originating from supplier initiatives, reductions in time-to-market and contributions to the savings pipeline. Also relevant are the number of active innovation partners and operational KPIs such as service level. A combination of innovation and performance metrics gives the most realistic picture.

Is Open Innovation also worthwhile for SMEs?

Yes, SMEs in particular benefit because they can leverage external expertise without building their own research departments. Digital marketplaces and structured partner processes lower the barriers to entry. What matters is a clear focus on a few high-leverage projects rather than broad, non-committal cooperations.