Make Your 'Industrie 4.0' Initiative Successful Through Adaptive Sourcing

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Analyst(s): Frank Ridder

"Industrie 4.0" is an integrated digital transformation requiring change in organizations that increasingly seek assistance from ESPs. Sourcing managers should use this research to explore adaptive sourcing, a framework that leverages three layers for different I40 sourcing requirements.

Analysis

"Industrie 4.0" (I40) is a strategic vision initiated by the German government to create and enhance digital skills in the German industry. It describes a future virtual or physical digital platform that manages various operational or business processes by enriching them with data and information from the industrial Internet of Things (IoT; see "Industrie 4.0 — The Ten Things the CIO Needs to Know").

I40 will drive digital transformation in many organizations in all industries worldwide. In order for this to succeed, organizations require internal and external alignment to partners and customers that is organized in a specific governance model, which Gartner calls I40 program governance (see "Succeed With Your Industrie 4.0 Initiative Through Efficient Program Governance"). This governance framework contains strategic as well as operational programs that, by design, enable organizations to manage I40 initiatives against tangible quantitative and qualitative outcomes. These programs support I40 initiative leaders in making informed decisions about the progress that digitization can bring in order to advance the entire organization and bring competitive differentiation in an increasingly agile and interconnected marketplace, where IT is not just the business back office anymore.

Organizations often cannot drive I40 and the related digital transformation themselves. CIOs increasingly rely on their sourcing organizations to identify and start a relationship with service providers that can help them drive I40 into their business environment — within but also across multiple organizations. In Gartner’s CIO survey from early 2014, 70% of CIOs indicated that they will change their technology and sourcing relationships in the next two to three years for a variety of reasons. Figure 1 depicts that framework.
The I40 program governance consists of five key areas: business outcomes, project management, culture management, architecture management and sourcing management. Gartner has outlined the following early best practices for these areas:

- **Intensify proactive business outcome management**: With I40, organizations and businesses transform their service environments that are driven by technical metrics into those driven by measurable business outcomes. Availability and performance are important requirements, but outcome is essential. As a result, for I40, this means that speed to solution, flexibility and IP generation need to be introduced as a currency for innovation and a conduit for change.

- **Allow project management to span multiple organizations and approaches**: Real project, program and portfolio management (PPM), when operating at the level of well-integrated practices, is the key enabler that allows organizations to identify and execute strategic change. Because of I40 programs’ huge impact, they very often require significant enhancements to the organization’s capabilities to optimize investments, execute big changes and deliver value approaches. Therefore, it is critical for organizations to decide quickly what PPM improvements they should make. Value realization will be key (not just service delivery).

- **Success with Industrie 4.0 requires the modernization of corporate cultures**: Organizations have different corporate cultures, which include different hierarchy models, collaboration models, employee empowerment levels and frameworks that support employees’ freedom to be creative and innovate daily. They are all fit for purpose, and there is no right or wrong culture;
however, with I40, this often requires reworking the corporate culture and coordinating different cultures (see "A Bimodal Enterprise Needs Three Subcultures").

- **Establish architecture management principles that are as open as necessary:** In addition to all efforts related to enterprise architecture management, any approach toward an orchestrated development of I40 solutions requires particular capabilities alongside the enterprise architecture process, as well as relevant skills in applying frameworks for guiding architectural efforts.

- **Evolve your sourcing management approach to adaptive sourcing:** Many organizations have spent years optimizing their risk management approach, and some now have an entire risk-avoidance culture. The disadvantage of a solid risk-avoidance culture is that employees hesitate to perform actions that *could* lead to failure. The problem with this approach is that these actions are *exactly* what organizations need to learn, act fast and increase their levels of creativity. Therefore, CIOs must work with their sourcing managers on key aspects when adopting their governance for I40:
  
  - **Scope:** The high number of digital technology options can lead to unmanageable complexities. There is a lack of competence because I40 requires cloud, mobile, social, analytics and IoT capabilities. Companies rarely have all these capabilities internally.
  
  - **Partners:** There will be a complex picture of potential I40 service providers — not just in terms of the number of providers, but also in other organizations that contribute to an initiative, like partners within the same industry.
  
  - **Delivery model:** The classic sourcing delivery models (onshore, offshore) get enriched with many new variants within the I40 ecosystem. New delivery models include, for example, crowdsourcing, which is enabling collaboration on innovation across many market entities, partners, companies and interest groups.
  
  - **Location:** Years ago, sourcing locations was much more important than it is today. With I40, location as a delivery attribute is almost irrelevant. However, in I40 projects that require development speed, location can be an important factor to consider.

It is evident that organizations need to work with external service providers (ESPs) to access innovation, to execute fast and to enable the necessary partner collaboration. These requirements connect I40 with sourcing, and add sourcing management to the core I40 program governance principles. However, the required sourcing approach differs from the traditional one, especially since movements in I40 require a high degree of agility and coordination across different teams, organizations and cultures.

Gartner has developed an adaptive sourcing framework that allows organizations to source different business requirements with different speeds, different stakeholders and different outcomes (see the Research Highlights section for more details). The adaptive sourcing concept consists of three layers:
Innovate: This layer describes service provider relationships that are digital-business-outcome-driven; they have high execution speed, and are innovation-focused and dynamic. The focus also is on speed, ideally of a transformative nature.

Differentiate: This layer includes service provider relationships that are demand-driven and process-improvement-driven (incremental innovation). Relationship conditions are medium term, and the major activity is change that delivers incremental value and ongoing optimization. Newly created intellectual property will be protected at this layer.

Run: This is the foundational layer, where the IT lights of an organization are kept on, efficient, reliable and secure. Relationships at this layer are cost-focused, with clear roles and responsibilities and accountabilities. Innovation gets productive at this layer and starts making money.

Recommendations

Sourcing managers of organizations that plan to engage in I40 initiatives should not only understand the importance of strong I40 program governance, but also transform their own approach to sourcing so that it best supports the business requirements for speed, innovation and a reliable foundation. More than in the past, sourcing managers should capture and understand the business process requirements, and align with business leaders beyond the CIO (for example, the business unit leaders and the corporate executive team).

Research Highlights

In Tables 1 through 4, we have listed some key conceptual and practical research documents to help sourcing managers develop and implement an adaptive sourcing approach.
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<thead>
<tr>
<th>Title</th>
<th>Summary</th>
<th>Authors</th>
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<tr>
<td>&quot;Adaptive Sourcing Innovate Layer: Innovation Strategies Accelerate Business Growth&quot;</td>
<td>IT sourcing executives must embrace innovation and partner with key stakeholders in driving innovation through sourcing initiatives. Digital disruption requires organizations to innovate. Adaptive sourcing is a model to drive business innovation using new technologies and external sources.</td>
<td>Ed Anderson, Claudio Da Rold, Frances Karamouzis, Ruby Jivan</td>
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<td>&quot;Adaptive Sourcing Run IT Layer: Focus on Both Operate and Modernize to Bring Operational Flexibility&quot;</td>
<td>Business innovation is critical in the digital economy. Optimizing Gartner’s Adaptive Sourcing Model Run IT layer is essential to meet resource challenges and introduce flexibility. Sourcing executives must drive roadmap development to modernize infrastructure and exploit new run IT opportunities.</td>
<td>Ruby Jivan, Claudio Da Rold, Frances Karamouzis, Ed Anderson, Frank Ridder</td>
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Source: Gartner (August 2015)
### Table 2. Adaptive Sourcing Strategy Research

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<td>&quot;Three-Step Roadmap to Bimodal Adaptive Sourcing: Leverage Digital Urgency to Be an IT Broker&quot;</td>
<td>Over 70% of businesses will implement bimodal IT and restructure their sourcing portfolio to cope with rapid digital business innovation. Sourcing executives have an opportunity to align to business innovation, evolve their sourcing portfolio and take a central, brokering role in IT.</td>
<td>Claudio Da Rold</td>
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<td>&quot;Business Outcomes, Differentiation and Performance Drive Bimodal Adaptive Sourcing Decisions&quot;</td>
<td>CEOs focused on digital innovation have new, fast requirements for IT sourcing. Sourcing executives must align their strategies with a layered architecture to deliver business outcomes through key capabilities, new delivery models and technologies.</td>
<td>Claudio Da Rold</td>
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<td>&quot;Bimodal IT and Adaptive Sourcing Are Critical to Digital Business Success&quot;</td>
<td>Organizations’ expectations are high for returns on digital business investments and great leaps in their digital maturity, but few are actually prepared to meet these. Sourcing executives and change agents must support digital innovation initiatives with new approaches and capabilities.</td>
<td>Claudio Da Rold Elise Olding Julie Short</td>
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<td>&quot;Prepare for the Internet of Things to Drive Big Change in Sourcing&quot;</td>
<td>Impacts from the IoT will cause the next big change in the infrastructure outsourcing industry. These impacts will require sourcing executives to plan for and drive change in areas such as pricing, solutioning, security and sourcing approaches.</td>
<td>DD Mishra</td>
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<td>&quot;Improving IT Agility Through Adaptive Sourcing&quot;</td>
<td>In a digital economy, IT agility is a given. However, traditional sourcing works against improvements and innovation, while uncoordinated business uses of IT cloud services further reduce IT agility. Adaptive sourcing of IT services is the practical alternative that addresses these shortcomings.</td>
<td>Andy Rowsell-Jones Claudio Da Rold Linda R. Cohen</td>
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Source: Gartner (August 2015)

### Table 3. Adaptive Sourcing and Enterprise Architecture Research

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<td>&quot;Combine Adaptive Sourcing and Enterprise Architecture to Drive Sustainable Digital Transformation&quot;</td>
<td>The business benefits of IT sourcing come from modular services that can be configured quickly as needed. Leading enterprise architects can enable the management of these &quot;service ecosystems,&quot; and make innovation sustainable over time.</td>
<td>Marcus Blosch Linda R. Cohen Claudio Da Rold</td>
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Source: Gartner (August 2015)
Table 4. Adaptive Sourcing Governance Research

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<td>&quot;Sourcing Governance Tames Complexity and Ensures Successful Multisourcing&quot;</td>
<td>Without formally established governance that aligns the business, IT and sourcing strategies, multisourcing cannot be effective. Sourcing executives must formalize a governance framework that designs the authorities, rules and processes to make and manage effective sourcing decisions.</td>
<td>Linda R. Cohen</td>
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<td>&quot;Sourcing Governance Prevents Corporate Risks When the Business Bypasses IT&quot;</td>
<td>With the C-suite expecting greater technology investment value, it is harder for IT and sourcing to satisfy stakeholders. This often results in the business bypassing them and purchasing cloud services directly from vendors. Sourcing executives must act now to mitigate risk and retain credibility.</td>
<td>Frank Ridder</td>
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Source: Gartner (August 2015)

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Enterprise Architecture Process and Framework; CIO Desk Reference Chapter 9, Updated Q4 2011"

"Bimodal IT: How to Be Digitally Agile Without Making a Mess"

"Bimodal IT and Adaptive Sourcing Are Critical to Digital Business Success"

"Establish IT Sourcing Principles for Successful Outsourcing"

Evidence

1 Industrie 4.0 was initiated by the German Federal Ministry for Economic Affairs and Energy. It is mainly a vision and a program that helps business communities take advantage of the digital revolution (see "Industrie 4.0: The Digitisation of the Economy," Federal Ministry for Economic Affairs and Energy).

2 In "Taming the Digital Dragon: The 2014 CIO Agenda," we evaluate the CIO’s position toward sourcing: “There is no sign that outsourcing will stop — 59% of CIOs intend to outsource more in the next two to three years, and only 13% will outsource less. However, more than two-thirds (70%) report that they will change their technology and service providers in the next two to three years.”

3 In 2015, Gartner ran I40 workshops with end-user and provider organizations in Frankfurt and Munich, Germany. In these workshops, we elaborated on the key internal influence and change factors. In all the workshops, speedier execution and a more dynamic sourcing approach were high on organizations’ wish lists.
More on This Topic

This is part of an in-depth collection of research. See the collection:

- A Practical Guide to Bimodal Adaptive Sourcing Research
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