

# Measuring Enterprise Innovation Maturity: Overcoming common pitfalls

## Abstract

While most organizations feel the strategic imperative to innovate, measuring innovation maturity, synergy, and organizational alignment are key challenges for most. The thrill and attraction around innovation and its associated actions often overlook the ability to put a process of rigor around the 'ability to innovate' as a key competency for organizational innovation. This is perhaps a key differentiator between the few top innovative organizations across the world and the plentiful others. The 'ability to assess enterprise innovation maturity' alongside the 'ability to innovate' are complementary as innovation strategies largely determine the magnitude of dividends that emerge out of organizational innovation.

Top innovative companies capitalize on realized innovation as industry leaders, while others search for varied strategic positionings in order to be competitive. Under the prevailing circumstances, there are challenges and threats that go beyond competition. While enterprises struggle to



## Taking stock of established Innovation Maturity Assessment Frameworks

Multiple globally recognized rankings for top innovative companies provide useful assessments for the level of innovation being achieved by the innovation leaders across industries. Table 1 (see below) lists some of these major global rankings, the key measurement focus, strengths, and major challenges for organizations in the areas of innovation measurement.

Reports	Key Measurement Focus	Strengths	Adoption Challenges and Limitations
Forbes Top 100 Most Innovative Companies (published every 2 years)	Ranked by Innovation Premium (difference between market capitalization and net present value of cash flows)	<ul style="list-style-type: none"> <li>Considers market sentiment needed for innovation</li> <li>Quantitative approach for innovation assessment</li> </ul>	<ul style="list-style-type: none"> <li>Understanding and applying Innovation Premium</li> <li>Industry specific contextualization is limited</li> </ul>
Global Innovation 1000 study by Strategy& (part of the PwC network)- Annual	<ul style="list-style-type: none"> <li>R&amp;D investments</li> <li>R&amp;D intensity (R&amp;D expenditure as a % of revenue)</li> <li>Perceptions of global innovative leaders &amp; managers</li> </ul>	<ul style="list-style-type: none"> <li>Metrics more straightforward and easier to calculate</li> <li>Reflects the seriousness of the organization towards innovation in terms of R&amp;D investments and intensity</li> </ul>	<ul style="list-style-type: none"> <li>Over emphasis on R&amp;D investments</li> <li>Perceptions of survey respondents vary</li> </ul>
BCG's most Innovative companies report (top 50) – Annual	<ul style="list-style-type: none"> <li>Financial Metrics - % of R&amp;D spending change, revenue change, EBIT change, TSR</li> <li>AI platforms, products, ecosystems</li> <li>Perceptions of around 2,500 Global Innovation executives surveyed globally</li> </ul>	<ul style="list-style-type: none"> <li>More complete picture of measurement as the assessment includes a combination of:                             <ol style="list-style-type: none"> <li>Company's financial performances</li> <li>Power of digitalization – to transform both the search for innovation and the resulting global architecture for innovation while redefining industries</li> </ol> </li> </ul>	Unlike industries like healthcare and pharmaceutical, whose core business is heavily innovation driven, for technology industry change in financial metrics may not be directly dependent upon investments in R&D every time. Changes in financials may be longitudinal
Fast Company – World's 50 most innovative companies - Annual	Specific methodology not disclosed in public forum. Assessment takes into consideration metrics like revenue, number of transactions, expansion of business lines, customer centricity.	<ul style="list-style-type: none"> <li>Along with top innovative leaders across industries, individual lists for sectors like AI, Robotics are also published.</li> <li>Rather than focusing on quantitative metrics, strong focus on customer centricity and business benefits are given.</li> </ul>	<ul style="list-style-type: none"> <li>More contextual for B2C players</li> <li>Opacity around details of methodology</li> </ul>
IFI (Information for Industry) – List of Innovators - Annual	Number of patents granted in a year	<ul style="list-style-type: none"> <li>Objective, quantifiable, and easily available data-driven approach</li> </ul>	<ul style="list-style-type: none"> <li>Patent though it continues to be one of the most important outcomes for innovation, may not always provide the true reflection of innovation for industries and limited focus around non-patentable innovations like business model transformation</li> <li>Consideration of strength of patent is also needed</li> </ul>

Reports	Key Measurement Focus	Strengths	Adoption Challenges and Limitations
Derwent Top 100 Global Innovators	<ul style="list-style-type: none"> <li>Number of patents filed for unique inventions</li> <li>Ratio of patents filed to granted</li> <li>number of basic inventions having quadrilateral patents</li> <li>Number of patent citations over the last 5 years excluding self-citations</li> </ul>	<ul style="list-style-type: none"> <li>Unlike IFI, considers number of granted patents along with quality of patents via metrics like patent citations</li> <li>Top Innovators listed for individual sectors</li> </ul>	<ul style="list-style-type: none"> <li>Patent as a prime element to measure innovation</li> </ul>

*Note: List ordered according to our perceptions of the most popular ones. Online engagement statistics. For Key metrics and other details on measuring methods References section provides the sources)*

Table 1: Comparison of top global innovation measurement methods

## Measuring innovation with a process-centric approach

All these are established models (in Table 1) with credibility and fair degree of advocacies and provide useful pointers with regards to measuring innovation and improvement. However, for self-assessing the level of innovation within organizations, no one methodology or system is sufficient. While learning from others or following global benchmarks ensures long-term aspirational guidance, what works well for innovation leaders like Apple and Microsoft, may not be industry agnostic or work in all situations, circumstances or context. An organization’s capability to innovate is rooted in its innovation system which is a coherent set of processes and structures that enable searching for new ideas catering to business problems, synthesizing these ideas to business concepts for product/service designs and launching them in the market to successfully monetize. Each enterprise is expected to have their own technology landscape and competency, varied business models, policies and most importantly, enterprises are likely to pursue differentiated innovation strategies. Hence, the ‘ability to measure innovation’ will be different for each organization and each needs to have a customized approach and focus to carve innovation as a core competency.

This underscores the importance of implementing a Process Driven Innovation Maturity Framework in the context of organizations.

## Building an Innovation Maturity Assessment Framework

There are multiple innovation maturity and assessment frameworks like CII Enterprise Innovation Maturity Framework<sup>1</sup>, KPMG Benchmarking Innovation Impact<sup>2</sup>, Cisco Innovation Maturity Model<sup>3</sup>, report by Fast Company<sup>4</sup>. In addition to organizations, even countries and cities – as functioning institutions are formulating frameworks and innovation metrics like the Global Innovation Index by INSEAD & WIPO<sup>5</sup>, India Innovation Index by NITI Ayog<sup>6</sup>, and Dubai Innovation Index by PwC<sup>7</sup> to assess their innovativeness. While it is important for organizations to build their own innovation assessment framework as an integral part of their innovation strategy, they can leverage generic concepts and customize these based on overall objectives and context, to accelerate outcomes.

Figure 2 provides a strategic view of how organizations can create an innovation assessment framework best suited for them.

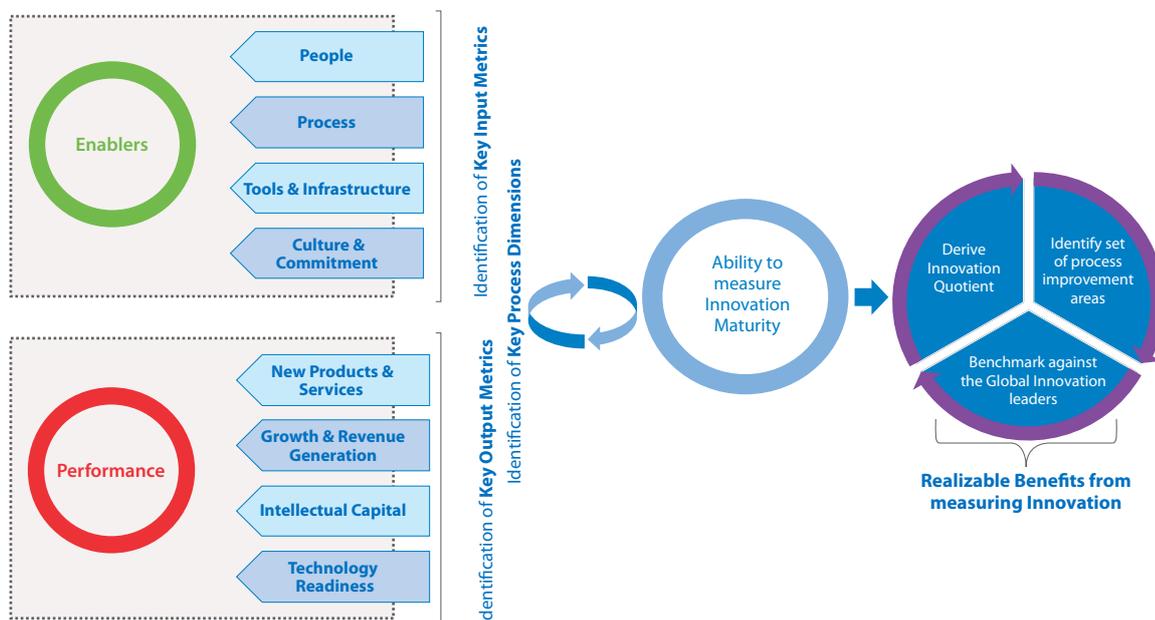


Figure 2: Creating an innovation assessment framework

[1] CII Enterprise Innovation Maturity Framework 2017-19 <https://www.innovationawards.ciiinnovation.in/Maturity-Framework-2019.php>

[2] Benchmarking Innovation Impact 2020 by KPMG – <https://info.kpmg.us/content/dam/info/en/innovation-enterprise-solutions/pdf/2019/benchmarking-innovation-impact-2020.pdf>

[3] Cisco Innovation Maturity Model -2017 <https://blogs.cisco.com/tag/innovation-maturity-model>

[4] Can Innovation Actually Be Measured by Fast Company (2013) – <https://www.fastcompany.com/3015229/can-innovation-actually-be-measured>

[5] The Global Innovation Index (GII) 2019 – <https://www.globalinnovationindex.org/Home>

[6] India Innovation Index Report – 2019 <https://niti.gov.in/node/875>

[7] Dubai Innovation Index - <https://www.dubaichamber.com/resources/dubai-innovation-index>

The complexity of any Innovation Assessment Model depends largely on the scale of the organization, its current innovation maturity level and the technology and business landscape. In creating a framework, it is important to balance the lead enablers and output generators as illustrated in Figure 2.

## Key enablers and performance generators

Framing the right set of innovation metrics for an organization requires a sharp focus on some of the key areas (as listed in Table 1). While some of these areas may look straightforward to measure, others are not. Moreover, besides measuring these innovation metrics as end goal, it is also about identifying and assessing the key processes and practices associated with these metrics within the organization and establishing a traceability of As-Is reality. This will help organizations calibrate improvement continually. For example, to track the ROI from innovation accurately, an organization needs to have a robust process in place to identify the percentage of associated revenue or profit that is attributable to innovation. This will vary industry wise. For instance, in the pharmaceutical industry whose core business is innovation driven it will be different from a technology industry where a large part of the revenue comes from the product related services. Measuring innovation ROI provides an opportunity for organizations to build and improve upon the internal processes and practices, while identifying effective ways of capturing their efficiency and effectiveness as an enterprise capability realized through continuous focus, iterative learning cycles and feedback loops.

Dimensions	Key Areas
Input	<ul style="list-style-type: none"> <li>■ R&amp;D Investments</li> <li>■ Leadership focus and commitment towards innovation</li> <li>■ Idea movement, adherence to timeliness and associated metrics</li> <li>■ Workforce engagement initiatives (effectiveness of employee talent development and engagement programs for innovation)</li> <li>■ Process improvement initiatives, increasing agility of the organization &amp; associated metrics</li> <li>■ Effectiveness of Customer engagement initiatives, market analysis to understand latest trends and technologies.</li> <li>■ Effectiveness of brand building exercises within the organization for improving perception.</li> </ul>
Output	<ul style="list-style-type: none"> <li>■ Return on investments</li> <li>■ New products &amp; services launched, associated % revenue</li> <li>■ Strengths of patents</li> <li>■ Cost savings &amp; profits through innovation</li> <li>■ Competitor Analysis (market share in terms of revenue, new products, new customer segments acquired)</li> <li>■ New idea generation from employees</li> <li>■ Social impact of innovation</li> <li>■ Awards &amp; recognition</li> </ul>

Table 2: Key Areas to Measure Innovation

## Enabling real organizational innovation

For every organization, measuring the ability to innovate is important to achieve true organizational innovation capability. However, initiatives to effectively achieve the “ability to measure innovation” need to improve the “ability to innovate” eventually. For this, organizations irrespective of scale or innovation maturity need to focus on building a contextual Innovation Assessment Framework that delivers a high degree of strategic fitment. Building such functional frameworks requires internal and external organizational context and a sharp focus on processes.

## Additional References

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Rupa Misra has been entrenched in the industry and TCS for more than 22 years, having worked in a variety of roles, on technologies, domains and portfolios that include Research & Innovation, Marketing & Communications, Consulting and Business Development, Product and Program Management. She currently runs a strategic initiative within the Corporate Research & Innovation function at TCS. With a background in Physics and Electronics, Rupa's professional interests lie in Enterprise Innovation, Strategy, Software Product management and Communications. She lives in Kolkata, India, with her husband and her son.

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