

The Agile Team's Guide to Predictability: Leveraging Functional Size and ISBSG Data to Prove High Performance



Introduction

The ISBSG repository contains a vast array of project data and includes data for projects undertaken in an agile way of working. This enables analysis of the differences between traditional projects and agile projects.

ISBSG collects industry data, where output is measured using ISO/IEC standardized and therefore objective, repeatable, auditable methods, such as Nesma, IFPUG and COSMIC function points.

Typical key metrics based on function points are:

- Project Delivery Rate (PDR)¹: Hours spent per function point
- Cost efficiency: Cost (or Price) per function point
- Quality: Defects per function point (in test and/or 1st month of production)
- Delivery Speed: Function points delivered per calendar month.

The ISBSG 'New Development & Enhancement' repository contains thousands of completed projects for which these metrics are calculated. This allows organizations to make better decisions based on facts instead of opinions.

In this short report we'll dive into the benefits of using functional size and standardized metrics based on ISBSG for the whole team to demonstrate high performance.

¹ The PDR is the inverse of the universal concept of Productivity (output/input) as it is easier to process for human minds, which usually struggles with metrics with many decimals

Introduction

The journey toward high performance in Agile development often begins with the realization that internal "gut feelings" and team-specific metrics, like story points, are insufficient to demonstrate true excellence to the outside world. While these measures assist with internal coordination, they lack the objective rigor and fixed reference points required to prove that a team is delivering competitive value compared to industry standards. By adopting standardized functional size measurement (FSM)—such as Nesma, IFPUG, or COSMIC function points—development teams can finally quantify their output in a consistent, verifiable, and repeatable way. This shift allows teams to move beyond subjective "guesstimates" and instead use their Project Delivery Rate (PDR) as a transparent, evidence-based indicator of their productivity and maturity.

Why Agile Teams Need an External Yardstick

For most Agile teams, "velocity" is the primary measure of success. However, it remains a "local currency"—subjective, team-specific, and prone to "point inflation" over time. This makes it nearly impossible to compare performance across different teams or to prove to stakeholders that the team is delivering at a competitive industry rate. To demonstrate they are doing a great job, teams need a "gold standard" for measuring delivery that is objective, repeatable, and auditable.

Standardized Functional Size Measurement (FSM) quantifies the actual functional user requirements delivered, independent of the technology, implementation details, or team estimation biases. By measuring output in functional units, a team establishes a stable denominator for productivity. This remains consistent even if team composition or sprint lengths change.

Objective size metrics serve as the strongest proxy for business value delivered. They allow teams to shift their focus from managing "tasks" to managing "functional value". This is evident in Table 1, which displays subjective "team-specific metrics" and their equivalent "objective metrics".

Feature	Team-Specific Metrics (e.g., Story Points)	Objective Metrics (FSM + ISBSG Data)
Unit of Measure	Subjective "Points" (Local Currency)	ISO Standardized Functional Units
Benchmarking	Impossible; no external reference	Global; compares against thousands of projects
Consistency	Subjective; prone to "point inflation"	Repeatable and auditable across teams
Value Focus	Effort and technical complexity	User-delivered functional value
Stakeholder Trust	Low; perceived as a "black box"	High; grounded in industry reality

Table 1: Team-Specific vs Objective Metrics

Proving Excellence with ISBSG Benchmarks

The International Software Benchmarking Standards Group (ISBSG) maintains a global repository containing thousands of completed software projects. This provides the historical context necessary to move from internal guessing to external validation. By mapping their performance against this data, an Agile team can transform its reporting from "we feel productive" to "we are performing at an industry-leading level".

Teams can use ISBSG data to demonstrate excellence across four key dimensions:

- **Productivity:** Proving that the team's Project Delivery Rate (PDR)—the hours spent per functional unit—is competitive or superior compared to industry averages for similar technology stacks.
- **Speed of Delivery:** Demonstrating a superior ability to deliver functional units per calendar month compared to global peer groups.
- **Cost Efficiency:** Showing a lower-than-average cost or price per functional unit delivered, providing executive leadership with defensible, size-based estimates.
- **Quality:** Highlighting excellence through a low defect density, measured as defects per functional unit during testing or the first month of production.

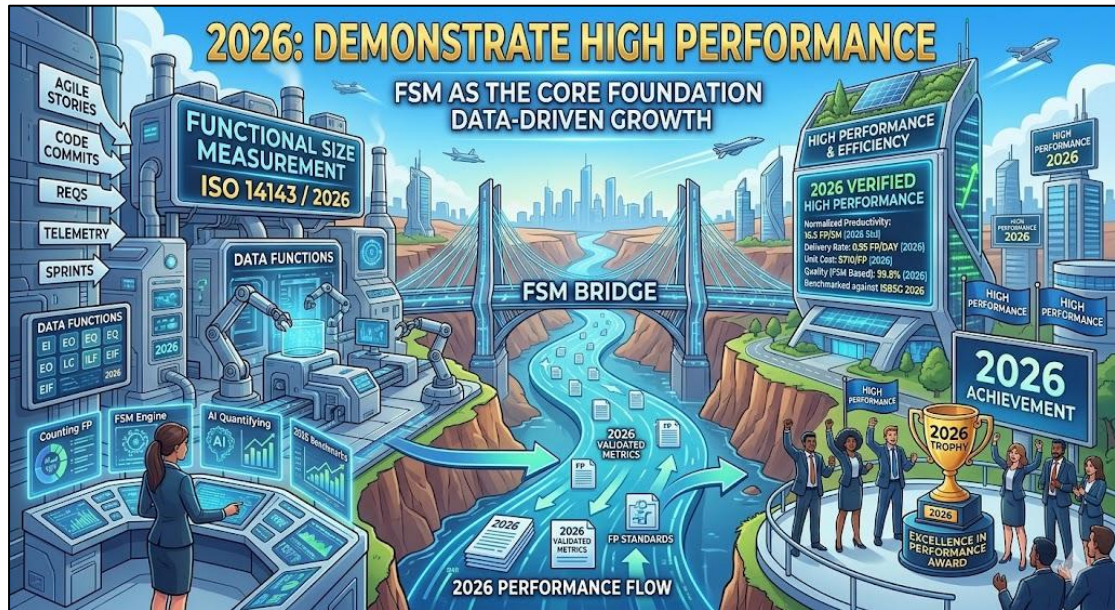


Figure 1: The value of function size measurement (FSM)

Strategic Advantages for the Team

Objective metrics derived from ISBSG data provide several strategic benefits that help a team maintain and showcase its high-performance culture:

- **Evidence-Based Retrospectives:** Instead of debating feelings, the team can analyze their PDR to see the literal impact of process changes, new tools, or technical debt over time.
- **Defensible Planning and Forecasting:** Teams can use industry-proven delivery rates to provide range-based forecasts that are statistically achievable, protecting them from unrealistic external pressure and "optimism bias".
- **Removing Impediments:** Having hard data makes it significantly easier to argue for better resources, training, or the removal of systemic organizational blockers by showing the tangible impact these factors have on productivity elsewhere in the industry.
- **Transparency and Trust:** Providing stakeholders with a "price-per-function" metric shifts the conversation from abstract points to tangible business value, fostering a culture of transparency and investment validation.

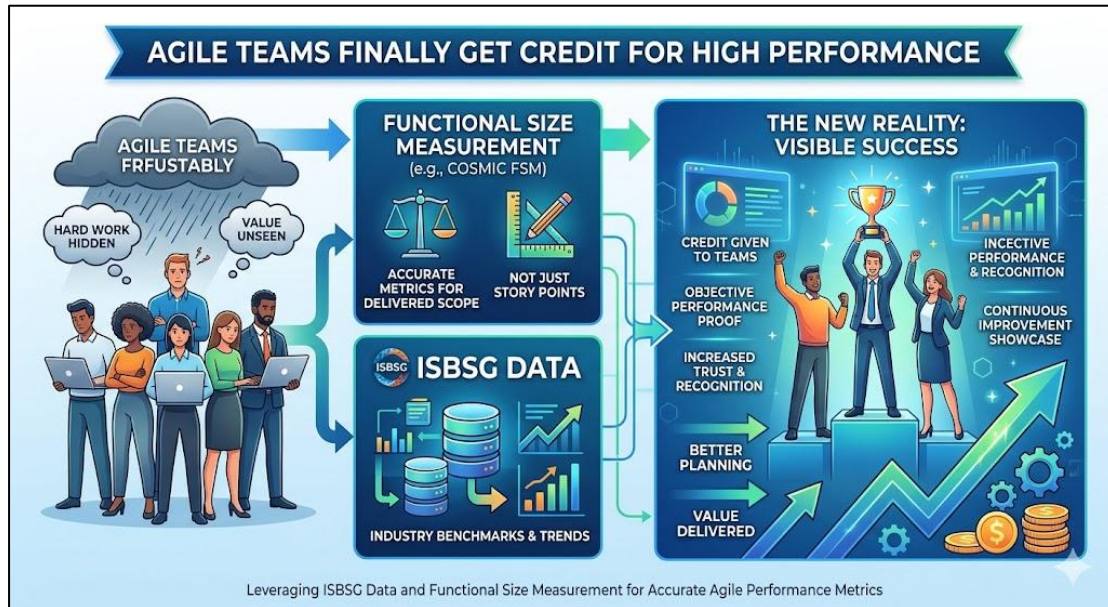


Figure 2: The value of FSM and ISBSG Data for AGILE Teams

Conclusion

The integration of standardized functional size measurement (FSM) with ISBSG benchmark data provides an evidence-based framework. This allows any Agile team to navigate the complexities of software delivery with global authority. By moving away from subjective estimation and adopting a universal language, teams can achieve a level of transparency and predictability previously out of reach. Ultimately, leveraging these industry benchmarks ensures that a team's journey toward Agility is measured not by the volume of effort expended, but by the tangible functional value delivered to the organization.

If you wish to do your own analysis, or if you are interested to use the ISBSG data for cost estimation, benchmarking, performance measurement, procurement, etc., please subscribe to the data here: <https://www.isbsg.org/project-data/>

The International Software Benchmarking Standards Group (ISBSG)

The ISBSG is a not-for-profit organization founded in 1997 by a group of National Software Metrics Associations. Their aim was to promote the use of IT industry data to improve software processes and products.

ISBSG is an independent international organization that collects and provides industry data of software development projects and maintenance & support activities in order to help all organizations (commercial and government, suppliers and customers) in the software industry to understand and to improve their performance and decision making. ISBSG sets the standards of software data collection, software data analysis and software project benchmarking processes and is considered to be the international thought leader in these practices.

The ISBSG mission is to support commercial and public organizations to improve the estimation, planning, control and management of IT software projects and/or maintenance and support contracts.

To achieve this: ISBSG maintains and grows 2 repositories of IT software development/maintenance & support data. This data originates from trusted, international IT organizations and can be obtained for a modest fee from the website www.isbsg.org/project-data/

Help us to collect data

ISBSG is always looking for new data. In return for your data submission, we issue a free benchmark report that shows the performance in your project or contract against relevant industry peers.

Please submit your data through one of the forms listed on <http://isbsg.org/submit-data/>

A specific Agile/Scrum data collections questionnaire can be downloaded here:

<https://cutt.ly/4vnuXVT>

Partners

This page will help you to find an ISBSG partner in your country:

<https://www.isbsg.org/board/>