CORPORATE PRESENTATION

THE INTERNATIONAL SOFTWARE BENCHMARKING STANDARDS GROUP

ISBSG
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ISBSG – THE STORY SO FAR

• ISBSG (International Software Benchmarking Standards Group) is a not-for-profit organization.

• The ISBSG was founded in Australia 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.

• Today ISBSG has partners from a variety of metrics associations and private corporations. Clients from around the world use our project data, reports and estimation tool to improve the planning of their software projects. We also provide resources to universities and academics.
Mission: “To improve the management of IT resources by both business and government, through the provision and exploitation of public repositories of software engineering knowledge that are standardized, verified, recent and representative of current technologies.”

All ISBSG data is

• validated and rated in accordance with its quality guidelines
• representative of the industry
• independent and trusted
• captured from a range of organization sizes and industries
• Anonymously stored in the repositories

“Without data you’re just another person with an opinion”

- W. Edwards Deming
ISBSG GOLD PARTNERS (2019/2020)

China
• SPI China - China System and Software Process Improvement Association
• Kexin - Beijing Kexin Science and Technology Ltd

Finland
FiSMA - Finnish Software Measurement Association

Italy
GUFPI-ISMA - Italian Software Metrics Association

Japan
JFPUG – Japanese Function Point User Group

Mexico
AMMS (Mexican Association of Software Metrics)

Netherlands
Nesma – Software Cost Estimation and Functional Size standard

Spain
Leda-MC – Consultancy company

USA
• Galorath – Cost Estimation Software
• IFPUG – International Function Point User Group
INTERNATIONAL SOFTWARE BENCHMARKING STANDARDS GROUP (ISBSG)

Grows and exploits two repositories of software data:

- New development projects and enhancements (R2019: > 9150 projects, releases and sprints)
- Maintenance and support (R2019: > 1100 applications)

Everybody can submit project data

- Questionnaires on the site, online or Excel data files
- Anonymous
- Free benchmark report in return
Data and Practical examples
Data is submitted to the ISBSG from many different IT and metrics organizations. These organizations have an interest in benchmarking, themselves, or wish to support the world’s only “open” repositories of IT project data.

The ISBSG software metrics data can be used to assist you with:

- Estimation
- Benchmarking
- Project management
- Bid support
- Outsourcing management
- Standards compliance
- Budget support
The data sample above shows that every project, release or sprint is a row in the Excel spreadsheet.

There are 253 columns, each a data attribute. However, not all data attributes have been submitted.

The Data Quality Rating and UFP rating (for functional size) are given by the ISBSG repository manager.
Projects/releases/sprints satisfying the following criteria are selected from the ISBSG Data:

Data Quality: A or B  
Year of Project > 2012  
Project Type: Enhancement  
Primary Programming language: Java  
Count approach: Nesma or IFPUG  

Example: 1000 FP project  
Min: $6.8 \times 1000 = 6,800$ hours  
Likely: $7.8 \times 1000 = 7,800$ hours  
Max: $9.4 \times 1000 = 9,400$ hours  

<table>
<thead>
<tr>
<th>PDR (hours/FP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of projects</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Percentile 10%</td>
</tr>
<tr>
<td>Percentile 25%</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Percentile 75%</td>
</tr>
<tr>
<td>Percentile 90%</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Average</td>
</tr>
</tbody>
</table>
A new Development project was carried out using the traditional waterfall approach by an internal team of a bank. It is a business application. The project size was 850 function points (Nesma/IFPUG)

The technology was Java and the effort spent:
• Design: 1110 hours
• Build: 4210 hours
• Test: 1530 hours
• Implementation: 230 hours
• The total number of effort hours is 7080 hours.

1. Normalize for missing phases: Plan and Specify (18.6%). Total lifecycle effort is 8698 hours
2. Calculate the PDR: 8698 / 850 = 10.2 hours per FP
3. Select a relevant peer group in the ISBSG repository: 14 projects selected
4. Determine the benchmark result. 10.2 lies between the P75 and P90, so the project’s productivity is worse than the market average.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>14</td>
</tr>
<tr>
<td>Min</td>
<td>1.1</td>
</tr>
<tr>
<td>P10</td>
<td>2.2</td>
</tr>
<tr>
<td>P25</td>
<td>2.6</td>
</tr>
<tr>
<td>Median</td>
<td>3.6</td>
</tr>
<tr>
<td>P75</td>
<td>6.2</td>
</tr>
<tr>
<td>P90</td>
<td>13.6</td>
</tr>
<tr>
<td>Max</td>
<td>24.7</td>
</tr>
<tr>
<td>Average</td>
<td>6.3</td>
</tr>
</tbody>
</table>
The subscriptions
ISBSG offers 4 different subscriptions:

- Corporate subscription
- Project Data subscription
- Report subscription
- Productivity Query Tool (PDQ) subscription
Reasons Why You Should Consider an ISBSG Corporate Subscription

ISBSG Corporate Data Subscribers receive:
1. an Excel spreadsheet containing data for all projects from the ISBSG Development & Enhancement Repository
2. an Excel spreadsheet containing data for all applications from the ISBSG Maintenance & Support Repository
3. free updates of the Development & Enhancement Repository and Maintenance & Support Repository, as they occur
5. unlimited access to all ISBSG Special Analysis reports
6. a report of your choice – you nominate the topic
7. a 12 month subscription to the new ISBSG Productivity Data Query tool
8. 10% discount on all ISBSG products and services

Price:
$7,500 for a license for 1-9 users.
$10,000 for a license for 10-49 users.
(All licenses are valid for 12 months. All prices are in Australian dollars).

• Download and read the Corporate Subscription Licence Agreement
Reasons Why You Should Consider an ISBSG Data Subscription

ISBSG Data Subscribers receive:

1. an Excel spreadsheet containing data for all projects from the ISBSG Development & Enhancement Repository
2. an Excel spreadsheet containing data for all applications from the ISBSG Maintenance & Support Repository

Use the ISBSG project data to improve your:

• Planning
• Estimation
• Benchmarking
• Outsourcing management
• Standards compliance
• Budget support
## THE REPOSITORIES

<table>
<thead>
<tr>
<th>Development &amp; Enhancement Data</th>
<th>Maintenance &amp; Support Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-respected organisations from around the world have contributed their software project data to the Development &amp; Enhancement (D&amp;E) Repository.</td>
<td>A varied range of organisations (including Outsourcing companies) have contributed their application data to the Maintenance &amp; Support Repository. (Note: most recent data submission was 2012)</td>
</tr>
<tr>
<td>Some quick facts about the D&amp;E Repository:</td>
<td>Some quick facts about the M&amp;S Repository:</td>
</tr>
<tr>
<td>– Consists of more than 9,000 software projects</td>
<td>– Consists of approximately 1,100 projects</td>
</tr>
<tr>
<td>– Projects developed in more than 32 different countries</td>
<td>– Projects from around the world</td>
</tr>
<tr>
<td>– Wide variety of industry and business types represented</td>
<td>– Wide variety of industry and business types</td>
</tr>
<tr>
<td>The data includes:</td>
<td>The data includes:</td>
</tr>
<tr>
<td>– Project description details</td>
<td>– Organisation description details</td>
</tr>
<tr>
<td>– Size and size attributes</td>
<td>– Project description details</td>
</tr>
<tr>
<td>– Effort and effort attributes</td>
<td>– Effort breakdown for Maintenance activities</td>
</tr>
<tr>
<td>– Defects</td>
<td>– Effort breakdown for Support activities</td>
</tr>
<tr>
<td>– Project schedule details</td>
<td>– Effort per application size rates</td>
</tr>
<tr>
<td>– Effort per phase</td>
<td>– Defect counts</td>
</tr>
<tr>
<td>– Architecture</td>
<td>– Platform</td>
</tr>
<tr>
<td>– Techniques</td>
<td>– Hardware</td>
</tr>
<tr>
<td>– Documentation used</td>
<td>– Programming Languages Used</td>
</tr>
<tr>
<td>– Platform details</td>
<td></td>
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</tbody>
</table>
• Expand your knowledge on a range of relevant project topics.

• At ISBSG, our experts statistically analyse our project data to produce informative reports.

• Subscribe now and receive downloadable copies of the reports listed.

• The subscription price is $250 (AUD).
SPECIAL ANALYSIS REPORTS

Example: Planning Projects: Effort Phase Ratios

**Project Phase Ratios - New development**

- Planning: 9.0%
- Specification: 8.1%
- Design: 11.5%
- Build: 14.2%
- Test: 41.2%
- Implementation: 16.1%

**Project Phase Ratios - Enhancement**

- Planning: 7.2%
- Specification: 6.7%
- Design: 10.7%
- Build: 33.2%
- Test: 12.2%
- Implementation: 30.0%
Making accurate project estimations can be both difficult and challenging. However, being able to precisely determine project duration, effort and delivery rate are essential for the success of your IT project.

How would you like to benchmark your project estimates against similar projects from the IT industry? At your fingertips, in just a few minutes?

View a short video clip demonstrating the use of the PDQ Too.
Since 2013, ISBSG has organised the annual IT Confidence Conferences in cooperation with its Gold partners.

This is a 1-day conference, aimed to restore confidence in IT projects by using historical industry project data.

The presentations from these conferences can be downloaded for free.

- The following IT Conference conferences are available:
  - 2013: Rio de Janeiro (Brazil)
  - 2014: Tokyo (Japan)
  - 2015: Florence (Italy)
  - 2016: Los Angeles (USA)
  - 2017: Beijing (China)
  - 2018: Mexico City (Mexico)
  - 2019: Beijing (China)
  - 2020: Florence (Italy)
AGILE CORNER

- **Agile Productivity Measurement**
  Agile software development empowers teams. It enables the product to be developed correctly instead of having a project-like focus. This has led to less control on a management level. [Read more]

- **Managing AGILE Activities**
  Agile enables development teams to bring major benefits to software customers. [Read more]
  Would you like a free copy of: *You prefer Facts not Stories – Managing Agile Activities Using Standardised Measures?*

- **Effort Estimation**
  This study examines the performance of estimation models using Story Points and COSMIC Function Points. [Download your free report]
  Would you like a free copy of the Industry Case Study to find out?

- **Estimating AGILE Team Size**
  Would you like a free copy of How to Estimate the Required Team Size of AGILE Teams? [Download your free report]

- **Productivity is Important**
  Productivity measurement and improvement is an important activity in most industries, often crucial for their survival. [Read more]

- **New Agile Data Collection Questionnaire**
  ISBSG has released a new data collection questionnaire specifically for Agile projects. [Download the Agile Data Collection Questionnaire and submit your projects. Your submission to the ISBSG will help others learn about the productivity of Agile projects]
• How to Estimate the required size of agile teams?
• Productivity Measurement of Software Projects
• Use case: Independent estimate / supplier proposal review
• Case study: Software project estimation at a large bank
THANKS FOR YOUR ATTENTION

WWW.ISBSG.ORG