Analysis of CRM Projects

Introduction

As the ISBSG repository contains more data of projects carried out in an agile way of working, analysis of differences between traditional projects and agile projects becomes more significant.

ISBSG collects industry data, where output is measured using ISO/IEC standardized and therefore objective, repeatable, auditable methods. These methods include Nesma, IFPUG and COSMIC function-point counting methods. 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)
- Speed: Function points delivered per calendar month.

The ISBSG 'New Developments & Enhancements' repository contains thousands of completed projects for which these metrics are calculated. This enables organizations to use this industry data for fact-based understanding and decision making.

In this short paper, we analyze projects, from the ISBSG Repository, that represent enhanced, existing Customer Relation Management (CRM) systems. These systems enable businesses to support relationships with existing customers, while also winning new customers. The aim is to improve profitability and productivity for the business.

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[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.

Dataset selection

For this analysis, we have selected the following data from the ISBSG Repository: projects measured using IFPUG or Nesma size-measurement methods, data quality rating of "A" or "B" (indicating the project has high integrity), the project was implemented later than 2015 and the project's application type is "CRM".

The 77 projects satisfying the given criteria, above. Of these projects, one new development project was omitted so only enhancement-type projects are analyzed. These are shown in Figure 1.
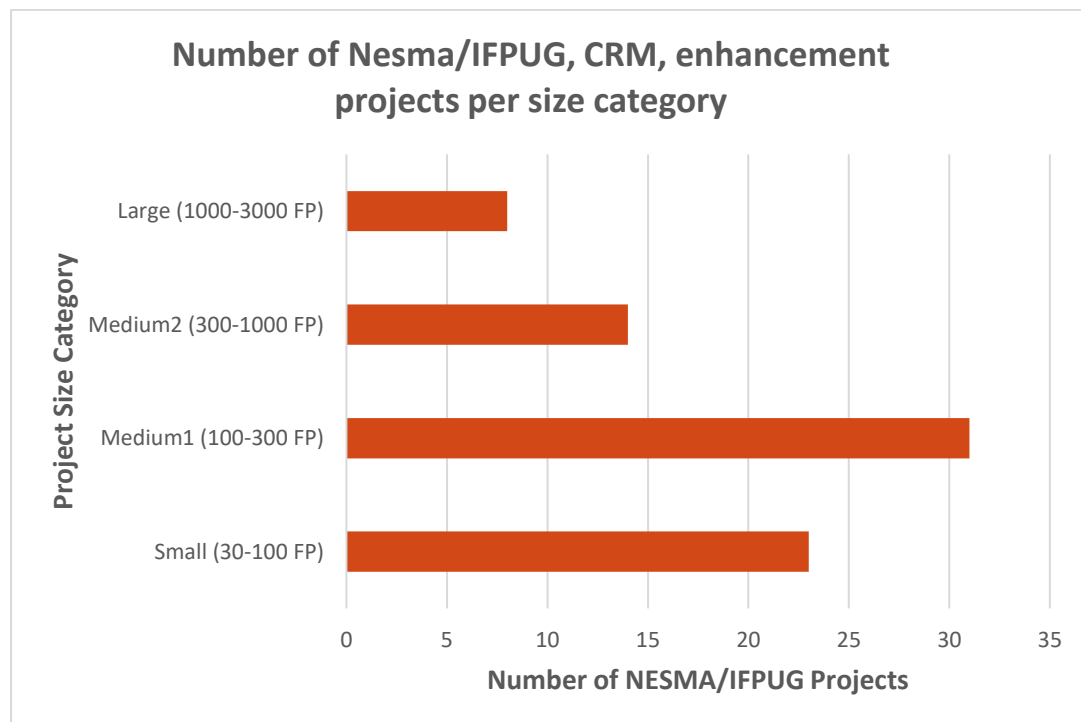

Figure 1: Number of Nesma/IFPUG, CRM, enhancement projects per size category

Analysis results

In Figure 2, Productivity (i.e. Project Delivery Rate), for each size category, is shown for the Nesma/IFPUG, CRM, enhancement projects described in the previous section. Productivity is represented via the percentiles between P25 (25th percentile) and P75 (75th percentile), as well as the Median, which can be considered the market average for the data set.
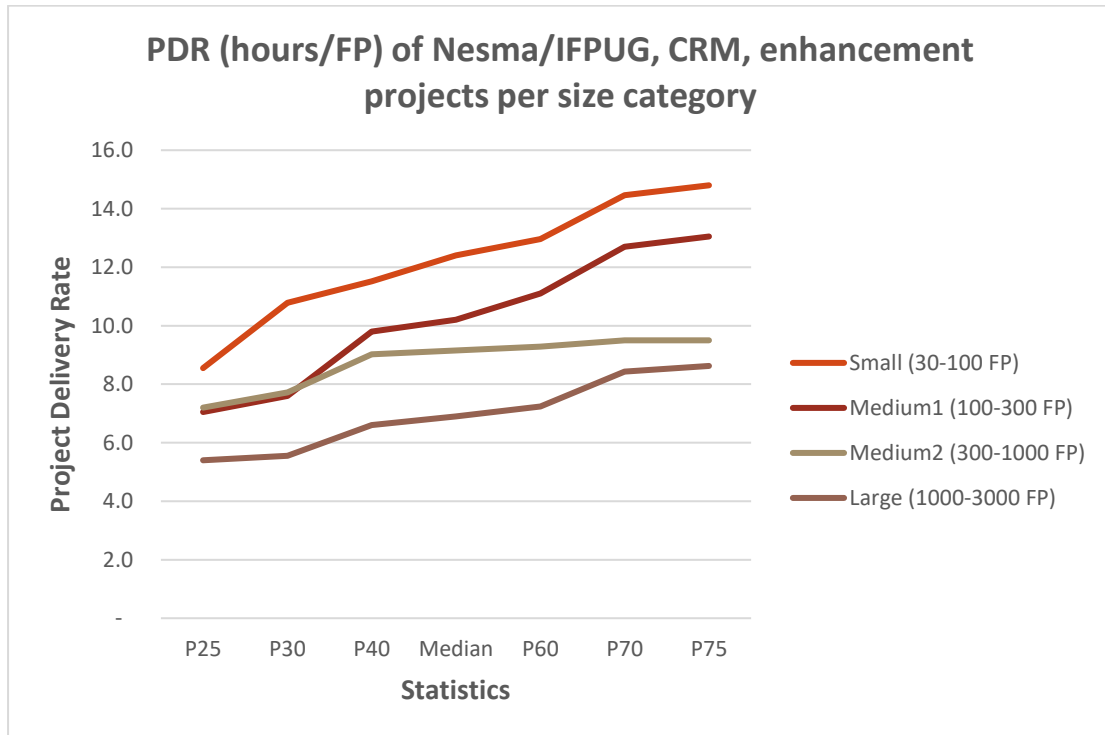
PDR (hours/FP) of Nesma/IFPUG, CRM, enhancement projects per size category

Figure 2: The distribution of PDR in CRM enhancement projects measured in Nesma/IFPUG

As shown in other ISBSG studies, there seems to be a relationship between project size and productivity. As shown in Figure 2, the larger the project size, the higher the productivity (i.e. lower Project Delivery Rate in hours spent per FP delivered).

When performing the same analysis, on the same set of projects, for Delivery Speed (the number of FP delivered per month), it becomes clear that the larger the project, the faster that the functionality is produced.
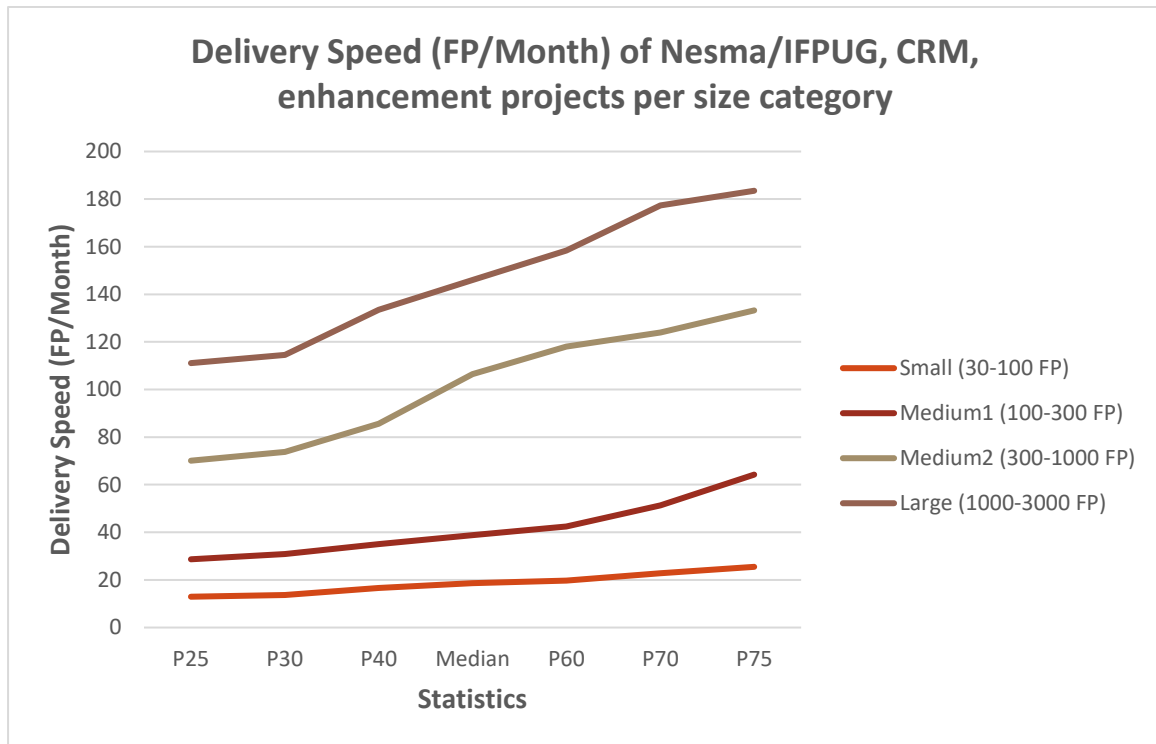

Figure 3: The distribution of Delivery Speed in CRM enhancement projects measured in Nesma/IFPUG

Conclusions

This high-level analysis of CRM enhancement projects indicates that it is more cost effective to carry out larger projects, as these deliver functionalities faster with a better productivity than smaller projects.

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

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