Potential Metric Items From FPA Spreadsheet

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Abstract

Evaulation of various potential matrics, performance indicators from the Excel workbook that Software Quality Assurance collected called First Pass Acceptance.[1]

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1 Introduction

The data is processed using R[2], Version 3.4.3 named Kite-Eating Tree. The only extension (package or library) utilized is lubridate (version 1.7.1) to provide key functionality in the processing of dates.

The data is read into R from a comma seperated value (csv) file which is derived (saved) from the spreadsheet without modification. Additional values are computed as needed.

This report is prepared in the R enviroment using a collection of packages know as Sweave that included knitr which in turn feeds the package into LaTeX 2$_\varepsilon$

[1] Date Ran: Wednesday 24th January, 2018 at 14:45
[2] RStudio is utilized as an IDE

a typeseting program to produce a PDF file. LaTeX 2$_\varepsilon$ in implented in MiTeX. LaTeX 2$_\varepsilon$ is utilizing the folowing packages to control style and formating:

- datetime and
- multitoc

This will only show a point in time summary and no trends.

2 Data and Calculations

2.1 Data

A seperate data dictionary will be prepared to for both the source data and computed values stored in R.

2.2 Calculations

All calculations presented here have not been implemented in R as formulas.

3 Work Yet to be Completed

3.1 Formula

Some calculations would be better implemented as formulas. The calculations need to be evulated and the formulas developed where needed.

3.2 Trending

Eventually the "System" will be updated to select the data on a for a calander month. After processing the resulots will be stored in a seperate file. This will allow for longer term trending of this data.

3.2.1 Graphs

When "trending" is implented graphs of the trends will also be added.

4 Quanity Metrics

4.1 Application supported

This is a list of all application support this period.
Note: Alphabatize the list

```
 [1] "Groninger"                    "Assay File Database "
 [3] "PCN/SCN"                      "WWLIMS"
 [5] "Pulse"                        "DFCS"
 [7] "DPW"                          "QIMS"
 [9] "Abbott Transfusion Medicine" "Apollo/PHM"
[11] "AFMS"                         "SAS"
[13] "Metrics Library"              "DaVinci"
```

4.2 Number of Projects

The total number of projects worked on in this period. This may differ from the application list because some applications may have more than one project in the periond.

```
[1] 15
```

4.3 Number of reviews

This is the number of items reviewed, a document will be counted more than once if it is reviewed more than once.

```
[1] 66
```

4.4 Number of items reviewed

This is the number of unique items reviewed, each item is only counted once regardless of how many times it is reviewed.

Note: This is reporting low due to certian items having no way to descrimate between such as multiple executions of the same test script or results from an IIVP run on different computers within the same project.

```
[1] 57
```

4.5 Number of Projects Started

The point at which a project is started is when version 1 of the *Software Change Request* is approved.

Note: There is an issue with this right now; it fails to count projects using the ML process as there is no SCR in that process. It is combined into the Project Plan.

```
[1] 2
```

4.6 Projects Completed

The point at which a project is considered completed is when version 1 of the *System Certification Summary* is approved.

Note: There is an issue with this right now; as it fails to count projects that use the ML report process as there is no system certification.

```
[1] 0
```

4.7 Number Of Deliverables By Type

This is unique for each deliverable. It only counts each document once so a deliverable that is disapproved and then approved is only counted once.

CII	Design Verification
5	2
FRS	IIVP results
3	6
Project Plan	Software Change Request
3	4
Software Compliance Assessment	System Certification Summary
3	1
Test Protocol	Test Protocol Results
18	5
Traceability	URS
3	1
User Acceptance Protocol	Validation Plan
2	1

4.8 Number of deliverable by application

This is the number of unique deliverables that each application submitted. Itonly counts each document once, regardless of the status.

Abbott Transfusion Medicine	AFMS
1	7
Apollo/PHM	Assay File Database
8	1
DaVinci	DFCS
3	6
DPW	Groninger
3	1
Metrics Library	PCN/SCN
1	2
Pulse	QIMS
8	4
SAS	WWLIMS
1	11

4.9 Number of Approvals, Disapprovals, and First Pass Approvals

```
   A A-FP    D
  14   37   15
```

5 Rate Metrics

5.1 Document Approval Rate

This is portion of documents that are approved upon review.

It is computed by counting the number of approvals devided that by the total number of reviews.

```
[1] 0.7575758
```

5.2 First Pass Acceptance

this is the portion of documents that are approved on the first review conducted by SQA.

It is computed by counting the number of first pass approvals devided by the number of reviews.

```
[1] 0.5454545
```