

SQA Metric Items From FPA Spreadsheet - Feburary 2018

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Abstract

Evaulation of various potential metrics, performance indicators from the Excel workbook that Software Quality Assurance collected called First Pass Acceptance. This will only be run for the month of January 2018. ¹

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¹Date Ran: Tuesday 6th March, 2018 at 13:39

1 Introduction

The data is processed using R², 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 L^AT_EX 2_ε a typesetting program to produce a PDF file. L^AT_EX 2_ε is implmented in MiT_EX. L^AT_EX 2_ε 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 implmented graphs of the trends will also be added.

²RStudio is utilized as an IDE

4 Quantity Metrics

4.1 Application supported

This is a list of all application support this period.

Note: Alphabetize the list

[1]	"QIMS"	"WWLIMS"
[3]	"Alinity Source Verifier"	"DaVinci"
[5]	"Metrics Library"	"SAS"
[7]	"AFMS"	"Pulse"
[9]	"DFCS"	"PEAR"
[11]	"EDMS"	"TODS"
[13]	"PCN/SCN"	"Groninger"
[15]	"DARA Filler DHM and RU"	"BioCommand Batch Control Plus"
[17]	"CMSNext"	"Apollo/PHM"
[19]	"GS Reports"	"Navigator"
[21]	"Assay File Database"	"eNovator"
[23]	"TrendReader"	

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 period.

[1] 47

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] 300

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 certain items having no way to discriminate between such as multiple executions of the same test script or results from an IIVP run on different computers within the same project.

[1] 237

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: This now counts ML type projects (Metrics Library and GS Reports) using the Project Plan as the point that a project starts.

[1] 13

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: now counts GS (Global Service) Reports Move to Production as the end of project.

[1] 10

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.

Cancellation	CII
2	13
Design Documentation	Design Verification
2	11
ERES	FRS
1	3
IDP	IIVP
2	5
IIVP results	ISSD
41	2
Move to Production	Other
0	0
Project Plan	Release Notes
6	2
Software Change Request	Software Compliance Assessment
13	6
System Certification Summary	Test Protocol
10	46
Test Protocol Results	Traceability
37	15
URS	User Acceptance Protocol
1	5
User Acceptance Protocol results	Validation Plan
13	1

4.8 Number of Deliverable by Application

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

Abbott Transfusion Medicine	AFMS
0	21
Alinity Source Verifier	Apollo/PHM
15	4
Assay File Database	BioCommand Batch Control Plus
1	1
CMSNext	DARA Filler DHM and RU
7	5
DaVinci	DFCS
1	10
DPW	EDMS
0	4
eNovator	Groninger
1	3
GS Reports	ideaPoint
3	0
IRIS	Metrics Library
0	17
Navigator	PCN/SCN
2	8
PEAR	Pulse
3	44
QIMS	Reliasoft Xfmea
15	0
SAS	TODS
1	6
TrendReader	WVLIMS
2	63

4.9 Number of Approvals, Disapprovals, and First Pass Approvals

A	A-FP	D
55	203	42

4.10 Table of Deliverables by Application

	Cancellation	CII	Design	Documentation
Abbott Transfusion Medicine	0	0		0
AFMS	0	1		0
Alinity Source Verifier	0	1		0
Apollo/PHM	0	0		0

Assay File Database	0	0	0
BioCommand Batch Control Plus	0	0	0
CMSNext	0	0	0
DARA Filler DHM and RU	0	0	0
DaVinci	0	0	0
DFCS	0	1	0
DPW	0	0	0
EDMS	0	0	0
eNovator	0	0	0
Groninger	0	1	0
GS Reports	0	0	0
ideaPoint	0	0	0
IRIS	0	0	0
Metrics Library	0	0	2
Navigator	2	0	0
PCN/SCN	0	1	0
PEAR	0	0	0
Pulse	0	2	0
QIMS	0	1	0
Reliasoft Xfmea	0	0	0
SAS	0	0	0
TODS	0	0	0
TrendReader	0	0	0
WWLIMS	0	5	0

	Design Verification	ERES	FRS	IDP	IIVP
Abbott Transfusion Medicine	0	0	0	0	0
AFMS	0	0	0	1	0
Alinity Source Verifier	1	0	1	0	1
Apollo/PHM	0	0	0	0	0
Assay File Database	0	0	0	0	0
BioCommand Batch Control Plus	0	0	0	0	0
CMSNext	0	0	0	0	0
DARA Filler DHM and RU	0	1	0	0	0
DaVinci	0	0	0	0	0
DFCS	1	0	0	0	1
DPW	0	0	0	0	0
EDMS	1	0	0	0	0
eNovator	0	0	0	0	0
Groninger	1	0	0	1	0
GS Reports	0	0	0	0	0
ideaPoint	0	0	0	0	0
IRIS	0	0	0	0	0
Metrics Library	0	0	0	0	0
Navigator	0	0	0	0	0
PCN/SCN	0	0	0	0	0

PEAR	1	0	0	0	0
Pulse	2	0	2	0	2
QIMS	1	0	0	0	0
Reliasoft Xfmea	0	0	0	0	0
SAS	0	0	0	0	0
TODS	0	0	0	0	0
TrendReader	0	0	0	0	1
WWLIMS	3	0	0	0	0

	IIVP results	ISSD	Move to Production	Other
Abbott Transfusion Medicine	0	0		0
AFMS	1	1		0
Alinity Source Verifier	2	0		0
Apollo/PHM	0	0		0
Assay File Database	0	0		0
BioCommand Batch Control Plus	1	0		0
CMSNext	0	0		0
DARA Filler DHM and RU	0	0		0
DaVinci	1	0		0
DFCS	2	0		0
DPW	0	0		0
EDMS	0	0		0
eNovator	0	1		0
Groninger	0	0		0
GS Reports	0	0		0
ideaPoint	0	0		0
IRIS	0	0		0
Metrics Library	0	0		0
Navigator	0	0		0
PCN/SCN	2	0		0
PEAR	0	0		0
Pulse	3	0		0
QIMS	4	0		0
Reliasoft Xfmea	0	0		0
SAS	0	0		0
TODS	0	0		0
TrendReader	1	0		0
WWLIMS	24	0		0

	Project Plan	Release Notes
Abbott Transfusion Medicine	0	0
AFMS	0	0
Alinity Source Verifier	0	1
Apollo/PHM	0	0
Assay File Database	1	0
BioCommand Batch Control Plus	0	0

CMSNext	0	0
DARA Filler DHM and RU	1	0
DaVinci	0	0
DFCS	0	1
DPW	0	0
EDMS	0	0
eNovator	0	0
Groninger	0	0
GS Reports	3	0
ideaPoint	0	0
IRIS	0	0
Metrics Library	1	0
Navigator	0	0
PCN/SCN	0	0
PEAR	0	0
Pulse	0	0
QIMS	0	0
Reliasoft Xfmea	0	0
SAS	0	0
TODS	0	0
TrendReader	0	0
WWLIMS	0	0

Software Change Request

Abbott Transfusion Medicine	0
AFMS	0
Alinity Source Verifier	1
Apollo/PHM	1
Assay File Database	0
BioCommand Batch Control Plus	0
CMSNext	0
DARA Filler DHM and RU	1
DaVinci	0
DFCS	0
DPW	0
EDMS	1
eNovator	0
Groninger	0
GS Reports	0
ideaPoint	0
IRIS	0
Metrics Library	0
Navigator	0
PCN/SCN	0
PEAR	1
Pulse	5

QIMS	0
Reliasoft Xfmea	0
SAS	0
TODS	2
TrendReader	0
WVLIMS	1

Software Compliance Assessment

Abbott Transfusion Medicine	0
AFMS	0
Alinity Source Verifier	1
Apollo/PHM	0
Assay File Database	0
BioCommand Batch Control Plus	0
CMSNext	0
DARA Filler DHM and RU	1
DaVinci	0
DFCS	0
DPW	0
EDMS	2
eNovator	0
Groninger	0
GS Reports	0
ideaPoint	0
IRIS	0
Metrics Library	0
Navigator	0
PCN/SCN	0
PEAR	1
Pulse	1
QIMS	0
Reliasoft Xfmea	0
SAS	0
TODS	0
TrendReader	0
WVLIMS	0

System Certification Summary Test Protocol

Abbott Transfusion Medicine	0	0
AFMS	1	7
Alinity Source Verifier	1	2
Apollo/PHM	1	1
Assay File Database	0	0
BioCommand Batch Control Plus	0	0
CMSNext	0	7
DARA Filler DHM and RU	0	0

DaVinci	0	0
DFCS	1	0
DPW	0	0
EDMS	0	0
eNovator	0	0
Groninger	0	0
GS Reports	0	0
ideaPoint	0	0
IRIS	0	0
Metrics Library	1	7
Navigator	0	0
PCN/SCN	1	1
PEAR	0	0
Pulse	1	17
QIMS	1	0
Reliasoft Xfmea	0	0
SAS	1	0
TODS	0	2
TrendReader	0	0
WVLIMS	1	2

	Test Protocol Results	Traceability	URS
Abbott Transfusion Medicine	0	0	0
AFMS	6	1	0
Alinity Source Verifier	1	2	0
Apollo/PHM	1	0	0
Assay File Database	0	0	0
BioCommand Batch Control Plus	0	0	0
CMSNext	0	0	0
DARA Filler DHM and RU	0	0	0
DaVinci	0	0	0
DFCS	1	0	0
DPW	0	0	0
EDMS	0	0	0
eNovator	0	0	0
Groninger	0	0	0
GS Reports	0	0	0
ideaPoint	0	0	0
IRIS	0	0	0
Metrics Library	6	0	0
Navigator	0	0	0
PCN/SCN	1	2	0
PEAR	0	0	0
Pulse	1	8	0
QIMS	2	0	0
Reliasoft Xfmea	0	0	0

SAS	0	0	0
TODS	2	0	0
TrendReader	0	0	0
WWLIMS	16	2	1

User Acceptance Protocol

Abbott Transfusion Medicine	0
AFMS	1
Alinity Source Verifier	0
Apollo/PHM	0
Assay File Database	0
BioCommand Batch Control Plus	0
CMSNext	0
DARA Filler DHM and RU	0
DaVinci	0
DFCS	0
DPW	0
EDMS	0
eNovator	0
Groninger	0
GS Reports	0
ideaPoint	0
IRIS	0
Metrics Library	0
Navigator	0
PCN/SCN	0
PEAR	0
Pulse	0
QIMS	4
Reliasoft Xfmea	0
SAS	0
TODS	0
TrendReader	0
WWLIMS	0

User Acceptance Protocol results

Abbott Transfusion Medicine	0
AFMS	1
Alinity Source Verifier	0
Apollo/PHM	0
Assay File Database	0
BioCommand Batch Control Plus	0
CMSNext	0
DARA Filler DHM and RU	0
DaVinci	0
DFCS	2

DPW	0
EDMS	0
eNovator	0
Groninger	0
GS Reports	0
ideaPoint	0
IRIS	0
Metrics Library	0
Navigator	0
PCN/SCN	0
PEAR	0
Pulse	0
QIMS	2
Reliasoft Xfmea	0
SAS	0
TODS	0
TrendReader	0
WWLIMS	8

Validation Plan	
Abbott Transfusion Medicine	0
AFMS	0
Alinity Source Verifier	0
Apollo/PHM	0
Assay File Database	0
BioCommand Batch Control Plus	0
CMSNext	0
DARA Filler DHM and RU	1
DaVinci	0
DFCS	0
DPW	0
EDMS	0
eNovator	0
Groninger	0
GS Reports	0
ideaPoint	0
IRIS	0
Metrics Library	0
Navigator	0
PCN/SCN	0
PEAR	0
Pulse	0
QIMS	0
Reliasoft Xfmea	0
SAS	0
TODS	0

TrendReader	0
WWLIMS	0

4.11 Table of Rejection Reasons

Inaccurate information	Incorrect scope
23	0
Insufficient testing	Insufficient traceability
3	1
Not compliant with procedure	Not following document version control
11	0
Not using template	Other
1	1
Requirement deficiency	
0	

4.12 Defects Verses Application

	Inaccurate information	Incorrect scope
AFMS	3	0
Alinity Source Verifier	2	0
Apollo/PHM	1	0
Assay File Database	0	0
DaVinci	1	0
DFCS	4	0
eNovator	0	0
PCN/SCN	1	0
PEAR	1	0
Pulse	1	0
QIMS	0	0
TODS	0	0
WWLIMS	8	0

	Insufficient testing	Insufficient traceability
AFMS	0	1
Alinity Source Verifier	0	0
Apollo/PHM	0	0
Assay File Database	0	0
DaVinci	0	0
DFCS	0	0
eNovator	0	0
PCN/SCN	0	0
PEAR	0	0
Pulse	1	0
QIMS	0	0
TODS	0	0

WVLIMS	2	0
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	Not compliant with procedure	
AFMS	3	
Alinity Source Verifier	0	
Apollo/PHM	1	
Assay File Database	1	
DaVinci	0	
DFCS	0	
eNovator	1	
PCN/SCN	2	
PEAR	0	
Pulse	0	
QIMS	0	
TODS	3	
WVLIMS	0	

	Not following document version control	
AFMS	0	
Alinity Source Verifier	0	
Apollo/PHM	0	
Assay File Database	0	
DaVinci	0	
DFCS	0	
eNovator	0	
PCN/SCN	0	
PEAR	0	
Pulse	0	
QIMS	0	
TODS	0	
WVLIMS	0	

	Not using template	Other Requirement	deficiency
AFMS	0	0	0
Alinity Source Verifier	0	0	0
Apollo/PHM	0	0	0
Assay File Database	0	0	0
DaVinci	0	0	0
DFCS	0	0	0
eNovator	0	0	0
PCN/SCN	1	0	0
PEAR	0	0	0
Pulse	0	0	0
QIMS	0	0	0
TODS	0	0	0
WVLIMS	0	1	0

4.13 Defects Verses Deliverable

```
> table(as.character(subset(FPA, subset = (status == "D"))$deliverable),
+       subset(FPA, subset = (status == "D"))$reason)
```

	Inaccurate information	Incorrect scope
CII	1	0
IIVP	1	0
IIVP results	3	0
ISSD	2	0
Project Plan	0	0
Software Change Request	3	0
System Certification Summary	5	0
Test Protocol	1	0
Test Protocol Results	3	0
Traceability	2	0
User Acceptance Protocol results	1	0

	Insufficient testing
CII	0
IIVP	0
IIVP results	1
ISSD	0
Project Plan	0
Software Change Request	0
System Certification Summary	0
Test Protocol	1
Test Protocol Results	1
Traceability	0
User Acceptance Protocol results	0

	Insufficient traceability
CII	0
IIVP	0
IIVP results	0
ISSD	0
Project Plan	0
Software Change Request	0
System Certification Summary	0
Test Protocol	0
Test Protocol Results	0
Traceability	1
User Acceptance Protocol results	0

	Not compliant with procedure
CII	0
IIVP	0

IIVP results	2
ISSD	1
Project Plan	1
Software Change Request	0
System Certification Summary	0
Test Protocol	2
Test Protocol Results	4
Traceability	1
User Acceptance Protocol results	0

Not following document version control

CII	0
IIVP	0
IIVP results	0
ISSD	0
Project Plan	0
Software Change Request	0
System Certification Summary	0
Test Protocol	0
Test Protocol Results	0
Traceability	0
User Acceptance Protocol results	0

Not using template Other

CII	0	0
IIVP	0	0
IIVP results	0	0
ISSD	0	0
Project Plan	0	0
Software Change Request	0	0
System Certification Summary	0	0
Test Protocol	0	0
Test Protocol Results	1	1
Traceability	0	0
User Acceptance Protocol results	0	0

Requirement deficiency

CII	0
IIVP	0
IIVP results	0
ISSD	0
Project Plan	0
Software Change Request	0
System Certification Summary	0
Test Protocol	0
Test Protocol Results	0

Traceability	0
User Acceptance Protocol results	0

4.14 Rejection Reason by Deliverable

CII	IIVP
1	1
IIVP results	ISSD
6	3
Project Plan	Software Change Request
1	3
System Certification Summary	Test Protocol
6	4
Test Protocol Results	Traceability
11	5
User Acceptance Protocol results	
1	

4.15 Number of Rejections by Project

AFMS Alinity Source Verifier	Apollo/PHM
8	2
Assay File Database	DFCS
1	4
eNovator	PEAR
1	1
Pulse	TODS
2	3
WWLIMS	
11	

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] 0.85

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 divided by the number of reviews.

[1] 0.6666667