

Exploration

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Purpose

To explore metrics options based on data collected by Software Quality Assurance in a spreadsheet for document review and approval.

Libraries used

No libriries used yet

```
library(lubridate)
```

```
##  
## Attaching package: 'lubridate'  
## The following object is masked from 'package:base':  
##  
##     date
```

Data

The data is presented in a CSV file (saved from an Excel workbook) with the following columns and characteristics

SQA SQA/E Preforming the review

Project ID Unique ID assigned to the project may come from NPV or ePAS

Application Application Name (limited selection)

Doc Version Version number of the document, also known as the revision number

Doc ID, if needed unique identifier to distinguish between documents for the same deliverable type within a project

Approver or Disapproved? Approval status from the following list

* **A** Approved

* **A-FP** Approved on first pass

* **D** Disapproved

Date of Approval or Disapproval Date action was taken

Reason for Disapproval: Selected from the following list

- Inaccurate information
- Incorrect scope
- Insufficient testing
- Insufficient traceability
- N/A
- Not compliant with procedure
- Not following configuration management
- Not following document version control
- Not using template
- Other
- Requirement deficiency

Import the data

The data is read in and variables are assigned more programically useful names.

```
FPA.Raw <- read.csv(file = "../data/First Pass Acceptance.csv",  
                    stringsAsFactors = FALSE,  
                    col.names = c("sqa",  
                                   "project",  
                                   "application",  
                                   "deliverable",  
                                   "version",
```

```

                                "docID",
                                "status",
                                "date",
                                "reason",
                                "comments"))
FPA <- FPA.Raw

```

format the data

factors

Set the following data as factors:

*SQA

*Application

*Deliverable

*status

```

FPA$sqa <- as.factor(FPA$sqa)
FPA$application <- as.factor(FPA$application)
FPA$deliverable <- as.factor(FPA$deliverable)
FPA$status <- as.factor(FPA$status)

```

Clean up reason

convert blank fields in status to NA when status is converted to a factor

```

FPA$reason <- as.factor(FPA$reason)
levels(FPA$reason)

```

```

## [1] ""
## [2] "Inaccurate information"
## [3] "Incorrect Approvers"
## [4] "Incorrect scope"
## [5] "Insufficient testing"
## [6] "Insufficient traceability"
## [7] "N/A"
## [8] "Not compliant with procedure"
## [9] "Not following configuration management"
## [10] "Not following document version control"
## [11] "Not using template"
## [12] "Other"
## [13] "Requirement deficiency"

```

```

levels(FPA$reason)[1] <- NA
levels(FPA$reason)

```

```

## [1] "Inaccurate information"
## [2] "Incorrect Approvers"
## [3] "Incorrect scope"
## [4] "Insufficient testing"
## [5] "Insufficient traceability"
## [6] "N/A"
## [7] "Not compliant with procedure"
## [8] "Not following configuration management"

```

```
## [9] "Not following document version control"
## [10] "Not using template"
## [11] "Other"
## [12] "Requirement deficiency"
```

Date

```
FPA$date <- as.Date(FPA$date, format = "%d-%B-%y")
```

Add new fields

Month and year

From date create month and year fields

```
FPA$month <- month(FPA$date, label = TRUE)
FPA$year <- year(FPA$date)
```

deliverable UID

create an unique identification (UID) for each processed item so that each deliverable is uniquely identified accross the entire data set. to do this the UID will consist of the Project, deliverable, docID and version seperated with a dash

```
FPA$UID <- paste(FPA$project,
                 FPA$deliverable,
                 FPA$docID,
                 FPA$version,
                 sep = "-"
                 )
```

Deliverable Month

```
TEMPJUNK <- FPA
table(FPA$month)
```

```
##
## Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
## 264 302 116 163 270 176 138 110 228 278 138 0
```

```
FPA <- subset(FPA,
              subset = month == "Jan")
table(FPA$month)
```

```
##
## Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
## 264 0 0 0 0 0 0 0 0 0 0 0
```

```
FPA <- TEMPJUNK
FPA <- subset(FPA,
              subset = month == "Feb")
table(FPA$month)
```

```
##
## Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
## 0 302 0 0 0 0 0 0 0 0 0 0
```

```
FPA <- TEMPJUNK
FPA <- subset(FPA,
              subset = month == "Jan")
rm(TEMPJUNK)
```

Simple count metrics

Projects worked

```
length(unique(FPA$project))

## [1] 35

as.character(unique(FPA$application))

## [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"
## [15] "CMSNext"             "GS Reports"
## [17] "IRIS"                "ideaPoint"
## [19] "TODS"                "eNovator"
## [21] "Reliasoft Xfmea"
```

Number of reviews

```
nrow(FPA)

## [1] 264
```

Number of Documents Reviewed

```
length(unique(FPA$UID))

## [1] 179
```

Number of Projects Started

```
length(unique(
  subset(
    subset(FPA,
           subset = ((status == "A" | status == "A-FP") & version == 1)),
    subset = deliverable == "Software Change Request")$project))

## [1] 5
```

Number of Projects Completed

```
length(unique(
  subset(
```

```
subset(FPA,
       subset = ((status == "A" | status == "A-FP"))),
subset = deliverable == "System Certification Summary")$project))
```

```
## [1] 3
```

Approval rate

probability of a document being approved when reviewed

```
nrow(unique(
  subset(FPA, subset = (status == "A" | status == "A-FP"))
))/nrow(FPA)
```

```
## [1] 0.6704545
```

First Pass Acceptance

probability of a document being approved when reviewed the first time

```
nrow(unique(
  subset(FPA, subset = status == "A-FP")
))/nrow(FPA)
```

```
## [1] 0.3712121
```

Number of deliverables by type

The number of each type of deliverable

```
table(FPA[!duplicated(FPA$UID),]$deliverable)
```

```
##
##              Cancellation              CII
##                0                11
##      Data Migration Plan      Data Privacy Plan
##                0                0
##      Decommissioning Report      Design Documentation
##                0                2
##      Design Verification              ERES
##                8                0
##                FRS              IDP
##                6                1
##                IIVP      IIVP results
##                9              14
##      IIVP Results              ISSD
##                0                1
##      Maintenance Plan      Move to Production
##                0                2
##                Other      Project Plan
##                1                6
##      Release Notes      Risk Assessment
##                1                0
##      Software Change Request      Software Compliance Assessment
##                9                7
##      System Certification Summary      Test protocol
##                4                0
```

##	Test Protocol	Test Protocol Results
##	47	26
##	Traceability	URS
##	14	2
##	URS/FRS	User Acceptance Protocol
##	0	3
##	User Acceptance Protocol results	Validation Plan
##	1	4

number of deliverable per application

```
table(FPA[!duplicated(FPA$UID),]$application)
```

##	Abbott Transfusion Medicine
##	1
##	ADD Shop Floor Paper (SFP) Report System
##	0
##	AFMS
##	9
##	Alinity S Non-LIMS spreadsheets
##	0
##	Alinity Source Verifier
##	0
##	AMM
##	0
##	AP 24 CIP
##	0
##	Apollo/PHM
##	10
##	ASPG
##	0
##	Assay File Database
##	3
##	BioCommand Batch Control Plus
##	0
##	CHaRM
##	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing
##	0
##	CMSnext
##	0
##	CMSNext
##	2
##	DARA Filler DHM and RU
##	0
##	DaVinci
##	22
##	DFCS
##	13
##	DPW
##	4
##	EDMS
##	0

##	eNovator	
##		1
##	EP Evaluator	
##		0
##	GDSN/GS1	
##		0
##	Groninger	
##		8
##	GS Reports	
##		4
##	Helios	
##		0
##	Helios Global Contact Center	
##		0
##	ideaPoint	
##		1
##	IRIS	
##		1
##	Knowledge Management	
##		0
##	Metrics Library	
##		4
##	MQA Protocol	
##		0
##	Navigator	
##		0
##	PCN/SCN	
##		10
##	PEAR	
##		0
##	Power BI	
##		0
##	Print on Demand	
##		0
##	Pulse	
##		11
##	QIMS	
##		19
##	QPI	
##		0
##	R&D Data Management Dashboard	
##		0
##	Reliasoft Xfmea	
##		1
##	RSLMS	
##		0
##	SAS	
##		4
##	TestComplete	
##		0
##	TODS	
##		1
##	TrendReader	
##		0


```
## WWLIMS
## 50
```

distrubation of result of reviews

```
table(FPA$status)
```

```
##
##      A A-FP      D
##    80   99   85
```

2 way table deliverables by application

```
table(FPA[!duplicated(FPA$UID),]$application,
      FPA[!duplicated(FPA$UID),]$deliverable)
```

```
##
## Cancellation
## Abbott Transfusion Medicine 0
## ADD Shop Floor Paper (SFP) Report System 0
## AFMS 0
## Alinity S Non-LIMS spreadsheets 0
## Alinity Source Verifier 0
## AMM 0
## AP 24 CIP 0
## Apollo/PHM 0
## ASPG 0
## Assay File Database 0
## BioCommand Batch Control Plus 0
## CHaRM 0
## Clinical Chemistry Excel Spreadsheet for Digital Printing 0
## CMSnext 0
## CMSNext 0
## DARA Filler DHM and RU 0
## DaVinci 0
## DFCS 0
## DPW 0
## EDMS 0
## eNovator 0
## EP Evaluator 0
## GDSN/GS1 0
## Groninger 0
## GS Reports 0
## Helios 0
## Helios Global Contact Center 0
## ideaPoint 0
## IRIS 0
## Knowledge Management 0
## Metrics Library 0
## MQA Protocol 0
## Navigator 0
## PCN/SCN 0
## PEAR 0
## Power BI 0
```

##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		CII
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	1
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	1
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	2
##	QPI	0

##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	5
##		
##		Data Migration Plan
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0

##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	0
##		
##		Data Privacy Plan
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	0

##		
##		Decommissioning Report
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	0
##		
##		Design Documentation
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0

##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	2
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	0
##		
##		
##		Design Verification
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0

##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	1
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	2
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	2
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	2
##		
##		ERES FRS IDP
##	Abbott Transfusion Medicine	0 0 0
##	ADD Shop Floor Paper (SFP) Report System	0 0 0
##	AFMS	0 2 0
##	Alinity S Non-LIMS spreadsheets	0 0 0
##	Alinity Source Verifier	0 0 0
##	AMM	0 0 0
##	AP 24 CIP	0 0 0
##	Apollo/PHM	0 0 0
##	ASPG	0 0 0
##	Assay File Database	0 0 0

##	BioCommand Batch Control Plus		0	0	0
##	CHaRM		0	0	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing		0	0	0
##	CMSnext		0	0	0
##	CMSNext		0	0	0
##	DARA Filler DHM and RU		0	0	0
##	DaVinci		0	1	1
##	DFCS		0	0	0
##	DPW		0	0	0
##	EDMS		0	0	0
##	eNovator		0	0	0
##	EP Evaluator		0	0	0
##	GDSN/GS1		0	0	0
##	Groninger		0	0	0
##	GS Reports		0	0	0
##	Helios		0	0	0
##	Helios Global Contact Center		0	0	0
##	ideaPoint		0	0	0
##	IRIS		0	0	0
##	Knowledge Management		0	0	0
##	Metrics Library		0	0	0
##	MQA Protocol		0	0	0
##	Navigator		0	0	0
##	PCN/SCN		0	2	0
##	PEAR		0	0	0
##	Power BI		0	0	0
##	Print on Demand		0	0	0
##	Pulse		0	0	0
##	QIMS		0	0	0
##	QPI		0	0	0
##	R&D Data Management Dashboard		0	0	0
##	Reliasoft Xfmea		0	0	0
##	RSLMS		0	0	0
##	SAS		0	0	0
##	TestComplete		0	0	0
##	TODS		0	0	0
##	TrendReader		0	0	0
##	WVLIMS		0	1	0
##					
##		IIVP			
##	Abbott Transfusion Medicine		0		
##	ADD Shop Floor Paper (SFP) Report System		0		
##	AFMS		0		
##	Alinity S Non-LIMS spreadsheets		0		
##	Alinity Source Verifier		0		
##	AMM		0		
##	AP 24 CIP		0		
##	Apollo/PHM		0		
##	ASPG		0		
##	Assay File Database		0		
##	BioCommand Batch Control Plus		0		
##	CHaRM		0		
##	Clinical Chemistry Excel Spreadsheet for Digital Printing		0		
##	CMSnext		0		

##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	3
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	2
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	1
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	1
##		
##		IIVP results
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	4
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	0

##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	1
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	2
##	QIMS	1
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	5
##		
##		IIVP Results
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0

##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		ISSD
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0

##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Maintenance Plan
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0

##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		
##		Move to Production
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	2
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0

##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Other
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0

##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	1
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WWLIMS	0
##		
##		Project Plan
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	1
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	2
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	1
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0

##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Release Notes
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0

##	TrendReader	0
##	WVLIMS	0
##		
##		Risk Assessment
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Software Change Request

##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	1
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	2
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	1
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	2
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	1
##	TrendReader	0
##	WWLIMS	0
##		
##		
##		Software Compliance Assessment
##	Abbott Transfusion Medicine	1
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0

##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	1
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	1
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	1
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	2
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	1
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		
##		System Certification Summary
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0

##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	0
##	DPW	1
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	1
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	1
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		
##		Test protocol
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0

##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Test Protocol
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	3
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	5
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0

##	DaVinci	5
##	DFCS	1
##	DPW	1
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	1
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	3
##	QIMS	7
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	2
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	19
##		
##		
##		Test Protocol Results
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	4
##	DFCS	2
##	DPW	2
##	EDMS	0

##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	3
##	QIMS	3
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	1
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	11
##		
##		
##		Traceability
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	1
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	2

##	GS Reports		0
##	Helios		0
##	Helios Global Contact Center		0
##	ideaPoint		0
##	IRIS		0
##	Knowledge Management		0
##	Metrics Library		0
##	MQA Protocol		0
##	Navigator		0
##	PCN/SCN		0
##	PEAR		0
##	Power BI		0
##	Print on Demand		0
##	Pulse		1
##	QIMS		3
##	QPI		0
##	R&D Data Management Dashboard		0
##	Reliasoft Xfmea		0
##	RSLMS		0
##	SAS		0
##	TestComplete		0
##	TODS		0
##	TrendReader		0
##	WVLIMS		5
##			
##		URS	URS/FRS
##	Abbott Transfusion Medicine	0	0
##	ADD Shop Floor Paper (SFP) Report System	0	0
##	AFMS	1	0
##	Alinity S Non-LIMS spreadsheets	0	0
##	Alinity Source Verifier	0	0
##	AMM	0	0
##	AP 24 CIP	0	0
##	Apollo/PHM	0	0
##	ASPG	0	0
##	Assay File Database	0	0
##	BioCommand Batch Control Plus	0	0
##	CHaRM	0	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0	0
##	CMSnext	0	0
##	CMSNext	0	0
##	DARA Filler DHM and RU	0	0
##	DaVinci	1	0
##	DFCS	0	0
##	DPW	0	0
##	EDMS	0	0
##	eNovator	0	0
##	EP Evaluator	0	0
##	GDSN/GS1	0	0
##	Groninger	0	0
##	GS Reports	0	0
##	Helios	0	0
##	Helios Global Contact Center	0	0
##	ideaPoint	0	0

##	IRIS	0	0
##	Knowledge Management	0	0
##	Metrics Library	0	0
##	MQA Protocol	0	0
##	Navigator	0	0
##	PCN/SCN	0	0
##	PEAR	0	0
##	Power BI	0	0
##	Print on Demand	0	0
##	Pulse	0	0
##	QIMS	0	0
##	QPI	0	0
##	R&D Data Management Dashboard	0	0
##	Reliasoft Xfmea	0	0
##	RSLMS	0	0
##	SAS	0	0
##	TestComplete	0	0
##	TODS	0	0
##	TrendReader	0	0
##	WVLIMS	0	0
##			
##		User Acceptance Protocol	
##	Abbott Transfusion Medicine		0
##	ADD Shop Floor Paper (SFP) Report System		0
##	AFMS		0
##	Alinity S Non-LIMS spreadsheets		0
##	Alinity Source Verifier		0
##	AMM		0
##	AP 24 CIP		0
##	Apollo/PHM		0
##	ASPG		0
##	Assay File Database		0
##	BioCommand Batch Control Plus		0
##	CHaRM		0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing		0
##	CMSnext		0
##	CMSNext		0
##	DARA Filler DHM and RU		0
##	DaVinci		0
##	DFCS		3
##	DPW		0
##	EDMS		0
##	eNovator		0
##	EP Evaluator		0
##	GDSN/GS1		0
##	Groninger		0
##	GS Reports		0
##	Helios		0
##	Helios Global Contact Center		0
##	ideaPoint		0
##	IRIS		0
##	Knowledge Management		0
##	Metrics Library		0
##	MQA Protocol		0

##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		User Acceptance Protocol results
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	0
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	0
##	DFCS	1
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	0
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0

##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0
##	R&D Data Management Dashboard	0
##	Reliasoft Xfmea	0
##	RSLMS	0
##	SAS	0
##	TestComplete	0
##	TODS	0
##	TrendReader	0
##	WVLIMS	0
##		
##		Validation Plan
##	Abbott Transfusion Medicine	0
##	ADD Shop Floor Paper (SFP) Report System	0
##	AFMS	1
##	Alinity S Non-LIMS spreadsheets	0
##	Alinity Source Verifier	0
##	AMM	0
##	AP 24 CIP	0
##	Apollo/PHM	0
##	ASPG	0
##	Assay File Database	0
##	BioCommand Batch Control Plus	0
##	CHaRM	0
##	Clinical Chemistry Excel Spreadsheet for Digital Printing	0
##	CMSnext	0
##	CMSNext	0
##	DARA Filler DHM and RU	0
##	DaVinci	1
##	DFCS	0
##	DPW	0
##	EDMS	0
##	eNovator	0
##	EP Evaluator	0
##	GDSN/GS1	0
##	Groninger	0
##	GS Reports	0
##	Helios	0
##	Helios Global Contact Center	0
##	ideaPoint	0
##	IRIS	0
##	Knowledge Management	0
##	Metrics Library	1
##	MQA Protocol	0
##	Navigator	0
##	PCN/SCN	0
##	PEAR	0
##	Power BI	0
##	Print on Demand	0
##	Pulse	0
##	QIMS	0
##	QPI	0

```
## R&D Data Management Dashboard 0
## Reliasoft Xfmea 0
## RSLMS 0
## SAS 0
## TestComplete 0
## TODS 0
## TrendReader 0
## WWLIMS 1
```

Number of Projects Started revisited

```
length(unique(subset(FPA, subset = (((status == "A" | status == "A-FP")
                                     & version == 1)
                                     & deliverable == "Software Change Request" ))
              $project)) +
length(unique(
  subset(FPA,
    subset = (((status == "A" | status == "A-FP")
                & version == 1)
                & application == "GS Reports")
                & deliverable == "Project Plan"))
  $project))
```

```
## [1] 7
```

Projects completed round two

```
length(unique(
  subset(
    subset(FPA,
      subset = (((status == "A" | status == "A-FP")
                  & version == 1))),
    subset = deliverable == "System Certification Summary")$project)) +
length(unique(
  subset(
    subset(FPA,
      subset = (((status == "A" | status == "A-FP")
                  & version == 1))),
    subset = deliverable == "Move to Production")$project))
```

```
## [1] 5
```

Defects

```
table(FPA$reason)
```

```
##
##          Inaccurate information
##                      38
##          Incorrect Approvers
##                      0
##          Incorrect scope
##                      2
##
```

```
##          Insufficient testing
##          6
##      Insufficient traceability
##          0
##          N/A
##          0
##      Not compliant with procedure
##          21
## Not following configuration management
##          0
## Not following document version control
##          3
##          Not using template
##          1
##          Other
##          7
##      Requirement deficiency
##          1
```

defects verse application

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

```
##
##          Inaccurate information Incorrect Approvers
##      AFMS          0          0
##      Apollo/PHM      1          0
##      Assay File Database  0          0
##      CMSNext          2          0
##      DaVinci         14          0
##      DFCS             1          0
##      DPW              1          0
##      Groninger        3          0
##      PCN/SCN          3          0
##      Pulse            0          0
##      QIMS             7          0
##      TODS             0          0
##      WWLIMS           6          0
##
##          Incorrect scope Insufficient testing
##      AFMS          0          0
##      Apollo/PHM      0          0
##      Assay File Database  0          0
##      CMSNext          0          0
##      DaVinci          0          0
##      DFCS             0          0
##      DPW              0          0
##      Groninger        0          0
##      PCN/SCN          2          0
##      Pulse            0          0
##      QIMS             0          6
##      TODS             0          0
##      WWLIMS           0          0
```

##			
##		Insufficient traceability	N/A
##	AFMS	0	0
##	Apollo/PHM	0	0
##	Assay File Database	0	0
##	CMSNext	0	0
##	DaVinci	0	0
##	DFCS	0	0
##	DPW	0	0
##	Groninger	0	0
##	PCN/SCN	0	0
##	Pulse	0	0
##	QIMS	0	0
##	TODS	0	0
##	WVLIMS	0	0
##			
##		Not compliant with procedure	
##	AFMS	4	
##	Apollo/PHM	0	
##	Assay File Database	2	
##	CMSNext	1	
##	DaVinci	4	
##	DFCS	0	
##	DPW	0	
##	Groninger	2	
##	PCN/SCN	1	
##	Pulse	1	
##	QIMS	6	
##	TODS	0	
##	WVLIMS	0	
##			
##		Not following configuration management	
##	AFMS	0	
##	Apollo/PHM	0	
##	Assay File Database	0	
##	CMSNext	0	
##	DaVinci	0	
##	DFCS	0	
##	DPW	0	
##	Groninger	0	
##	PCN/SCN	0	
##	Pulse	0	
##	QIMS	0	
##	TODS	0	
##	WVLIMS	0	
##			
##		Not following document version control	
##	AFMS	0	
##	Apollo/PHM	0	
##	Assay File Database	0	
##	CMSNext	0	
##	DaVinci	1	
##	DFCS	0	
##	DPW	0	

##	Groninger			0
##	PCN/SCN			0
##	Pulse			0
##	QIMS			0
##	TODS			0
##	WVLIMS			2
##				
##		Not using template	Other Requirement	deficiency
##	AFMS	0	0	0
##	Apollo/PHM	0	1	0
##	Assay File Database	0	1	0
##	CMSNext	0	0	0
##	DaVinci	0	3	1
##	DFCS	1	0	0
##	DPW	0	0	0
##	Groninger	0	0	0
##	PCN/SCN	0	0	0
##	Pulse	0	0	0
##	QIMS	0	2	0
##	TODS	0	0	0
##	WVLIMS	0	0	0

defects verse deliverable

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

##			
##		Inaccurate information	
##	CII		4
##	FRS		0
##	IDP		1
##	IIVP		3
##	IIVP results		1
##	Project Plan		5
##	Release Notes		0
##	Software Change Request		2
##	Software Compliance Assessment		2
##	System Certification Summary		3
##	Test Protocol		10
##	Test Protocol Results		2
##	Traceability		5
##	URS		0
##	User Acceptance Protocol		0
##	Validation Plan		0
##			
##		Incorrect Approvers	Incorrect scope
##	CII	0	0
##	FRS	0	0
##	IDP	0	0
##	IIVP	0	0
##	IIVP results	0	0
##	Project Plan	0	0
##	Release Notes	0	0

##	Software Change Request	0	1
##	Software Compliance Assessment	0	1
##	System Certification Summary	0	0
##	Test Protocol	0	0
##	Test Protocol Results	0	0
##	Traceability	0	0
##	URS	0	0
##	User Acceptance Protocol	0	0
##	Validation Plan	0	0
##			
##		Insufficient testing	
##	CII	0	
##	FRS	0	
##	IDP	0	
##	IIVP	0	
##	IIVP results	0	
##	Project Plan	0	
##	Release Notes	0	
##	Software Change Request	0	
##	Software Compliance Assessment	0	
##	System Certification Summary	0	
##	Test Protocol	6	
##	Test Protocol Results	0	
##	Traceability	0	
##	URS	0	
##	User Acceptance Protocol	0	
##	Validation Plan	0	
##			
##		Insufficient traceability	N/A
##	CII	0	0
##	FRS	0	0
##	IDP	0	0
##	IIVP	0	0
##	IIVP results	0	0
##	Project Plan	0	0
##	Release Notes	0	0
##	Software Change Request	0	0
##	Software Compliance Assessment	0	0
##	System Certification Summary	0	0
##	Test Protocol	0	0
##	Test Protocol Results	0	0
##	Traceability	0	0
##	URS	0	0
##	User Acceptance Protocol	0	0
##	Validation Plan	0	0
##			
##		Not compliant with procedure	
##	CII	2	
##	FRS	2	
##	IDP	0	
##	IIVP	1	
##	IIVP results	1	
##	Project Plan	0	
##	Release Notes	1	

##	Software Change Request	3
##	Software Compliance Assessment	0
##	System Certification Summary	0
##	Test Protocol	1
##	Test Protocol Results	7
##	Traceability	0
##	URS	2
##	User Acceptance Protocol	0
##	Validation Plan	1
##		
##	Not following configuration management	
##	CII	0
##	FRS	0
##	IDP	0
##	IIVP	0
##	IIVP results	0
##	Project Plan	0
##	Release Notes	0
##	Software Change Request	0
##	Software Compliance Assessment	0
##	System Certification Summary	0
##	Test Protocol	0
##	Test Protocol Results	0
##	Traceability	0
##	URS	0
##	User Acceptance Protocol	0
##	Validation Plan	0
##		
##	Not following document version control	
##	CII	1
##	FRS	0
##	IDP	0
##	IIVP	0
##	IIVP results	0
##	Project Plan	0
##	Release Notes	0
##	Software Change Request	0
##	Software Compliance Assessment	0
##	System Certification Summary	0
##	Test Protocol	2
##	Test Protocol Results	0
##	Traceability	0
##	URS	0
##	User Acceptance Protocol	0
##	Validation Plan	0
##		
##	Not using template	Other
##	CII	0 0
##	FRS	0 0
##	IDP	0 1
##	IIVP	0 0
##	IIVP results	0 0
##	Project Plan	0 1
##	Release Notes	0 1

```
## Software Change Request 0 0
## Software Compliance Assessment 0 1
## System Certification Summary 0 0
## Test Protocol 0 1
## Test Protocol Results 0 1
## Traceability 0 1
## URS 0 0
## User Acceptance Protocol 1 0
## Validation Plan 0 0
##
## Requirement deficiency
## CII 0
## FRS 1
## IDP 0
## IIVP 0
## IIVP results 0
## Project Plan 0
## Release Notes 0
## Software Change Request 0
## Software Compliance Assessment 0
## System Certification Summary 0
## Test Protocol 0
## Test Protocol Results 0
## Traceability 0
## URS 0
## User Acceptance Protocol 0
## Validation Plan 0
```

Rejects by deliverable

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

```
##
## CII FRS
## 7 3
## IDP IIVP
## 2 4
## IIVP results Project Plan
## 2 6
## Release Notes Software Change Request
## 2 7
## Software Compliance Assessment System Certification Summary
## 4 3
## Test Protocol Test Protocol Results
## 25 10
## Traceability URS
## 6 2
## User Acceptance Protocol Validation Plan
## 1 1
```

rejections by project

```
table(as.character(subset(FPA, subset = (status == "D"))$application))
```

##			
##	AFMS	Apollo/PHM Assay File Database	
##	4	2	3
##	CMSNext	DaVinci	DFCS
##	3	23	2
##	DPW	Groninger	PCN/SCN
##	1	5	6
##	Pulse	QIMS	TODS
##	1	23	1
##	WWLIMS		
##	11		