Key Performance Indicators

"IMO aims to develop, manage, and license medical terminology and healthcare IT software applications that allow clinicians to capture their clinical intent at the point-of-care"

Agenda

- Team Introduction

- Objective

- Research

- Process Flow

- JIRA, TFS, Octopus

- Deliverables

- Future Deliverables & Conclusion

- Questions

ELC Team

TEAM MEMBERS

Alec English

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COACHES

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Neil Doughty

Project Topic:
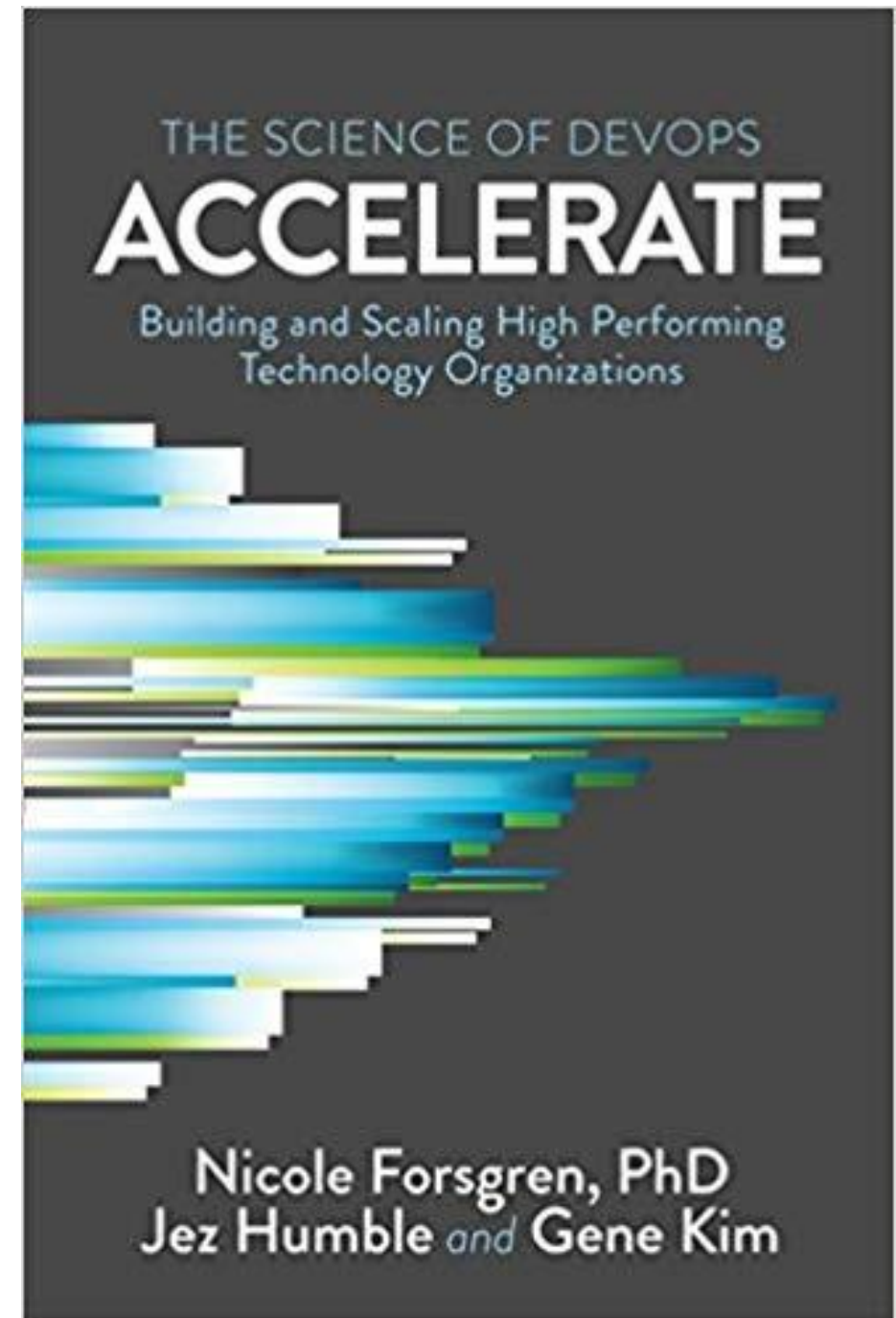
Key Performance Indicators

Objective

- Develop Key performance indicators to determine if business changes have a positive impact.

- Research and discuss KPIs with IMO team to receive data and implement proposed KPIs using sourced data.

- Make recommendations on data to use to model and report on these KPIs.

- Implement proposed KPIs to finalize functionality and measurability of DevOps practices.

- Report Findings to IMO team and help improve delivery.

Research

- State of DevOps - Report
- Accelerate
- Visit to IMO
- Key Points of Research:
  - Version Control
  - Deployment Automation
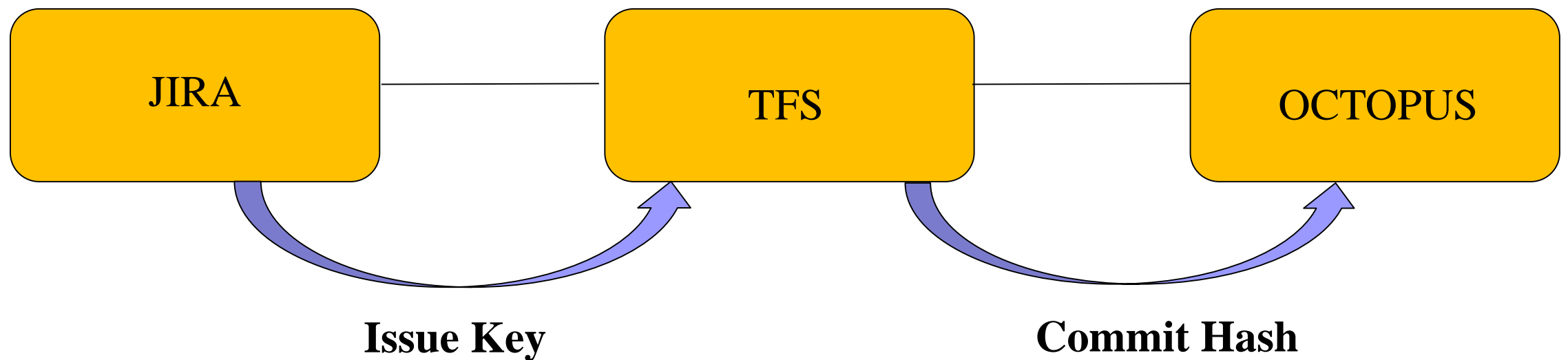 - Loosely coupled Architecture
  - Empowered teams

Process Flow

- JIRA
  - Ticketing system
- TFS
  - Code and build (Version control system)
- Octopus
  - Deployment Environment

Process Flow

- Establishment of connection between data sources

- Calculate Lead time to analyze and find ways to increase the delivery speed of the product.

JIRA

❑ Data Provided

projects: IPL, CLS, PERSE

■ Current State

 ☐ Present state of the issue

■ Status Change

 ☐ Changes in the status that the issue has underwent

■ Subtasks

 ☐ Minor tasks related to the current state

JIRA - Current State

	A	B	C	D	E	F	G	H	I	J	K	
1	issue_id	project_name	issue_key	issue_ type	summary	created	resolutiondate	priority	issue_status	resolution_ status	reporter	assigne
2	203208	Centralized Loggin	CLS-1576	Story	Remove SQS permissions from SNS Subscribe Policy	2019-02-13 19:20:52.151+00		None	Open		azimmerman	mdecar
3	66904	Centralized Loggin	CLS-1	Story	TIMEBOX 2 Days - Early Warning Notification System	2015-07-29 14:28:11+00	2015-09-03 09:31:02+00	None	Closed	Done	ssolimini	aburck
4	68227	Centralized Loggin	CLS-42	Task	Build a scalable (master-slave) Jmeter environment	2015-08-17 14:32:37+00	2016-04-27 17:06:30+00	None	Closed	Not Necessar	aziz	aziz
5	68378	Centralized Loggin	CLS-39	Story	Change Fact Extractor logging to send timezone infor	2015-08-19 13:00:17+00	2016-05-04 13:05:39+00	None	Closed	Fixed	ssolimini	ssolimi
6	68788	Centralized Loggin	CLS-43	Task	Data pipeline Portal logs	2015-08-26 11:34:21+00	2016-04-27 17:09:38+00	None	Closed	Duplicate	aziz	sgahlot
7	69755	Centralized Loggin	CLS-40	Story	Resolve issue with variable number of tabs	2015-09-11 12:00:55+00	2016-04-27 17:10:38+00	None	Closed	Won't Fix	aziz	sgahlot
8	72654	Centralized Loggin	CLS-41	Story	Determine/Document process for updating streams	2015-10-16 16:21:49+00	2016-04-27 17:11:59+00	Medium	Closed	Duplicate	ssolimini	ssolimi
9	84187	Centralized Loggin	CLS-68	Story	Log Node Manager - Add ability to filter active/inacti	2016-02-02 12:59:06+00		Medium	Open		ssolimini	ssolimi
10	84190	Centralized Loggin	CLS-67	Story	Log Node Manager - Add site name	2016-02-02 13:05:37+00		Medium	Open		kjacobs	ssolimi
11	84192	Centralized Loggin	CLS-70	Story	Log Node Manager - Improve Pagination	2016-02-02 13:08:02+00		Medium	Open		kjacobs	ssolimi
12	84915	Centralized Loggin	CLS-25	Story	IFE: Send the Log data to an analyzable database	2016-02-10 16:08:31+00	2018-03-09 13:46:02+00	None	Closed	Not Necessar	cmccorkle	ssolimi
13	84920	Centralized Loggin	CLS-27	Story	IFE: Implement data archiving for S3 and Redshift	2016-02-10 16:15:09+00		None	Open		cmccorkle	ssolimi
14	89281	Centralized Loggin	CLS-7	Story	Load portal SEARCH data into Redshift from S3	2016-03-21 09:52:32+00	2016-05-09 15:30:00+00	High	Closed	Fixed	ssolimini	ssolimi
15	202650	Centralized Loggin	CLS-1552	Story	Create terraform module for a standard ETL Alarms a	2019-02-11 17:32:51.956+00		None	Open		earnold	mdecar
16	93403	Centralized Loggin	CLS-32	Story	Load portal COUNT data into Redshift	2016-04-04 15:35:12+00	2017-02-08 13:02:25+00	None	Closed	Duplicate	aburck	aburck
17	93404	Centralized Loggin	CLS-33	Story	Load portal ITEM data into Redshift	2016-04-04 15:35:27+00	2017-02-08 13:02:24+00	None	Closed	Duplicate	aburck	aburck
18	93407	Centralized Loggin	CLS-34	Story	Load portal DETAIL data into Redshift	2016-04-04 15:35:38+00	2017-02-08 13:02:25+00	None	Closed	Duplicate	aburck	aburck

TFS

- Where the projects and software are built
- Grepwin tool used to search through the text files for the specific issue key.
- Searched through gitlog files for issue keys IPL, CLS or PERSE.
- Attributes in the given source file
  - □ Commit Hash
  - □ Author
  - □ Date and Time
  - □ Issue Key *
  - □ Comments

TFS(Log file)

4a206a7 - Howard Luo, Thu Dec 6 13:10:56 2018 -0600 : Merged PR 6732: Merge develope to master
afef2cd - Howard Luo, Fri Nov 30 12:21:15 2018 -0600 : Pushing different product ID
b39050c - Mina Khalil, Wed Nov 21 12:01:08 2018 -0600 : IPL-1650: Updated Roles' ARN for FHIR Authorizer
bf0e7a2 - Mina Khalil, Wed Nov 21 11:23:40 2018 -0600 : IPL-1650: Fixed roles' ARN
368900d - Mina Khalil, Wed Nov 21 10:37:08 2018 -0600 : IPL-1650: Fixed `staging` name invar maps
f9e0a16 - Daniel Hsu, Tue Nov 13 15:25:37 2018 -0600 : Merged PR 6351: Add Custom Authorizer lambda for FhirAdapter
f5e2882 - IMO\dahsu, Tue Nov 13 15:12:22 2018 -0600 : IPL-1528: Use dummy value for MethodArn
502744b - IMO\dahsu, Mon Nov 12 18:46:10 2018 -0600 : IPL-1528: Refactor tests to use json input, use fluent assertions
e7a5395 - IMO\dahsu, Mon Nov 12 13:38:47 2018 -0600 : IPL-1528: Remove autogenerated files
15b6e6b - IMO\dahsu, Mon Nov 12 13:38:28 2018 -0600 : IPL-1528: Rename test files to follow team conventions
d5cca1d - IMO\dahsu, Wed Nov 7 15:02:25 2018 -0600 : IPL-1528: Fix staging reference
133e1a6 - IMO\dahsu, Tue Nov 6 15:48:02 2018 -0600 : IPL-1528: Remove non-existent package
5cac355 - IMO\dahsu, Tue Nov 6 15:30:31 2018 -0600 : IPL-1528: Added FhirAdapterAuthorizer packages to build management
c0718c6 - IMO\dahsu, Tue Nov 6 14:50:58 2018 -0600 : Merge remote-tracking branch 'origin/develope' into feature/IPL-1528
6ed9dd8 - IMO\dahsu, Tue Nov 6 14:43:51 2018 -0600 : IPL-1528: correct file name in FAA nuspec
42621bc - IMO\dahsu, Tue Nov 6 14:26:52 2018 -0600 : IPL-1528: Change folder naming to match build convention?
3e1fb7d - IMO\dahsu, Mon Nov 5 14:07:17 2018 -0600 : IPL-1528: Change target framework to .NET Core 2.0
aacb7f8 - IMO\dahsu, Thu Nov 1 18:39:59 2018 -0500 : IPL-1528: pointed to the right DynamoDB tables
31b9bd6 - IMO\dahsu, Thu Nov 1 15:58:42 2018 -0500 : IPL-1528: Fix directory
6bb0d00 - IMO\dahsu, Thu Nov 1 15:54:44 2018 -0500 : IPL-1528: Include dotnet aws lambda tools to csproj
5e185e0 - IMO\dahsu, Thu Nov 1 15:54:24 2018 -0500 : IPL-1528: Add terraform scripts for lambda
aacc873 - IMO\dahsu, Wed Oct 31 15:17:44 2018 -0500 : IPL-1528: Add terraform scripts
8f831f2 - Howard Luo, Wed Oct 31 13:48:38 2018 -0500 : Merged PR 6342: Merge feature/IPL-1485 to develope
4929328 - Howard Luo, Wed Oct 31 12:19:12 2018 -0500 : IPL-1485: Pushing new value and fixing tf bug
7c69682 - Howard Luo, Wed Oct 31 11:31:56 2018 -0500 : IPL-1485: Renaming variable
fd09312 - Howard Luo, Wed Oct 31 11:25:13 2018 -0500 : IPL-1485: Pushing new integration tests
2ad660a - Howard Luo, Tue Oct 30 16:35:10 2018 -0500 : IPL-1485: Moment of truth part 2

TFS – Customized Data

Octopus raw data

<u>Here's the sample of raw source data</u>

- Some of the final outcomes include Build label, Branch, Commit hash, Repository etc.

Octopus

- Second column's information was hidden
- It's a multi-line column
- Map between Build #, Branch, Commit hash

- Build number
- Commit hash
- Branch
- Repository

Build Label	Branch	Commit hash
ApiAccessManagement_1.0.0.84	master (from refs/heads/master)	989eeda
BI Lambda Util – Terraform_1.0.2.157	CLS-1330-EA	3e46ff6

Octopus

- Branch, Commit Hash, Repository
  - Extracting Branch, Commit Hash, Repository from body column which consists of large chunks of data.

Sample data of one of the body column cells

Open Build Report in Web Browser <http://prd-tfsfpv01:8080/tfs/Collection01/BusinessIntelligence/_build/detail?buildUri=vstfs%3A%2F%2F%2FBuild%2FBuild%2F28720>

BatchedCI Build of DatabaseDeployment.BI (BusinessIntelligence)

Ran for 0.38 minutes (prd-tfsfpv02 - Controller), completed at Monday 03/06/17 12:08:52 PM.

Request Summary

Status: Succeeded

Requested By: Sneha Agarwal

Commit: refs/heads/master : 1e5a3e5 <http://prd-tfsfpv01:8080/tfs/Collection01/BusinessIntelligence/_git/BusinessIntelligence ETL/commit/1e5a3e50b54f4f6cba5efe12817403b9c8d5d2d0>

Associated Commits

Hash   Message   Submitter   Date

1e5a3e5 <http://prd-tfsfpv01:8080/tfs/Collection01/BusinessIntelligence/_git/BusinessIntelligence ETL/commit/1e5a3e50b54f4f6cba5efe12817403b9c8d5d2d0>   BI-4122: changes to include num_requests column Sneha Agarwal03/06/2017 12:08:15
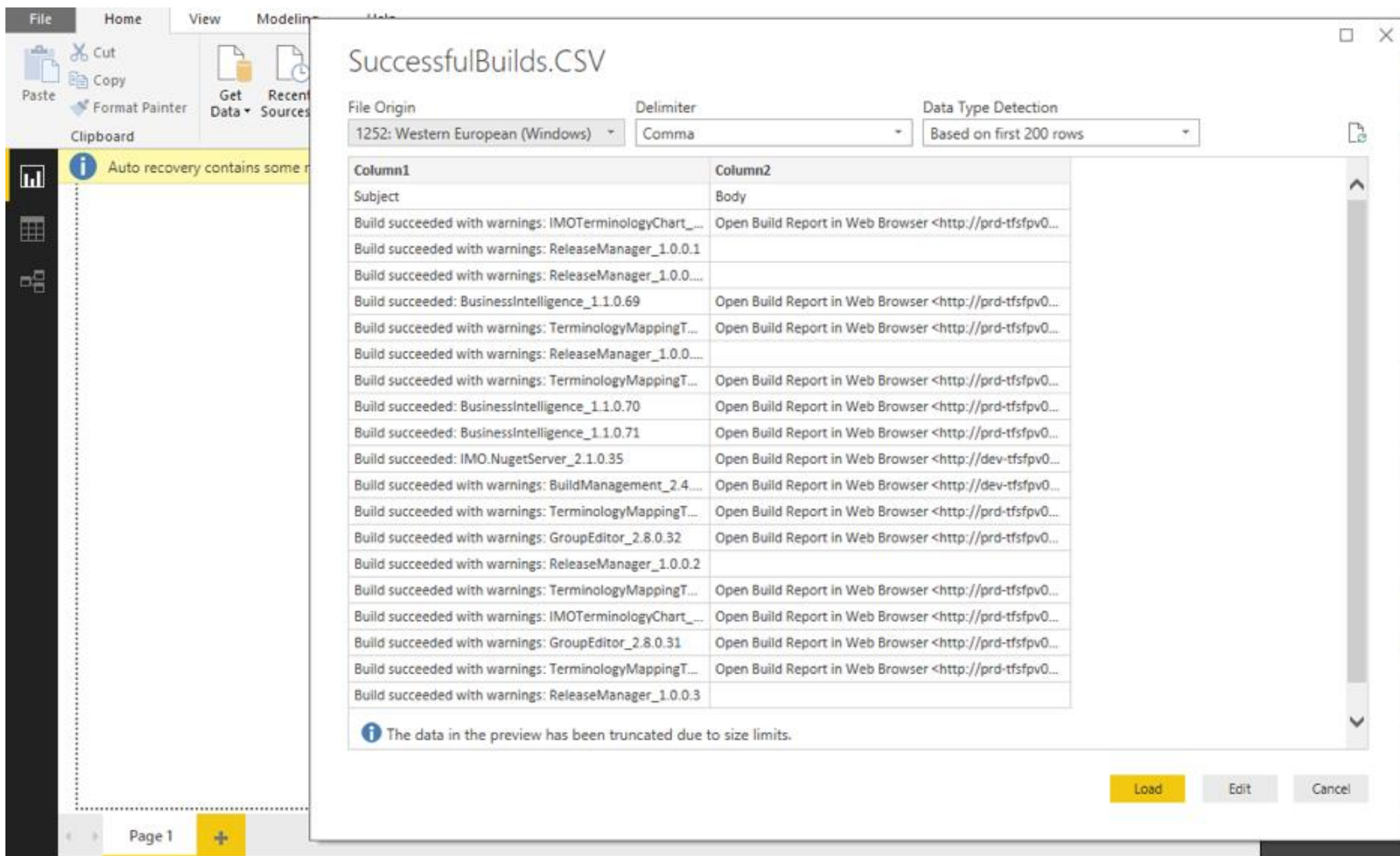
Build Summary

Any CPU\Release: 0 error(s), 0 warning(s).

Test Summary None   Generated by IMO TFS Event Subscriber 3.3.0.78

Octopus

- Step 1:
  - ☐ Import data from Excel to Power BI.

Octopus

- Step 2:
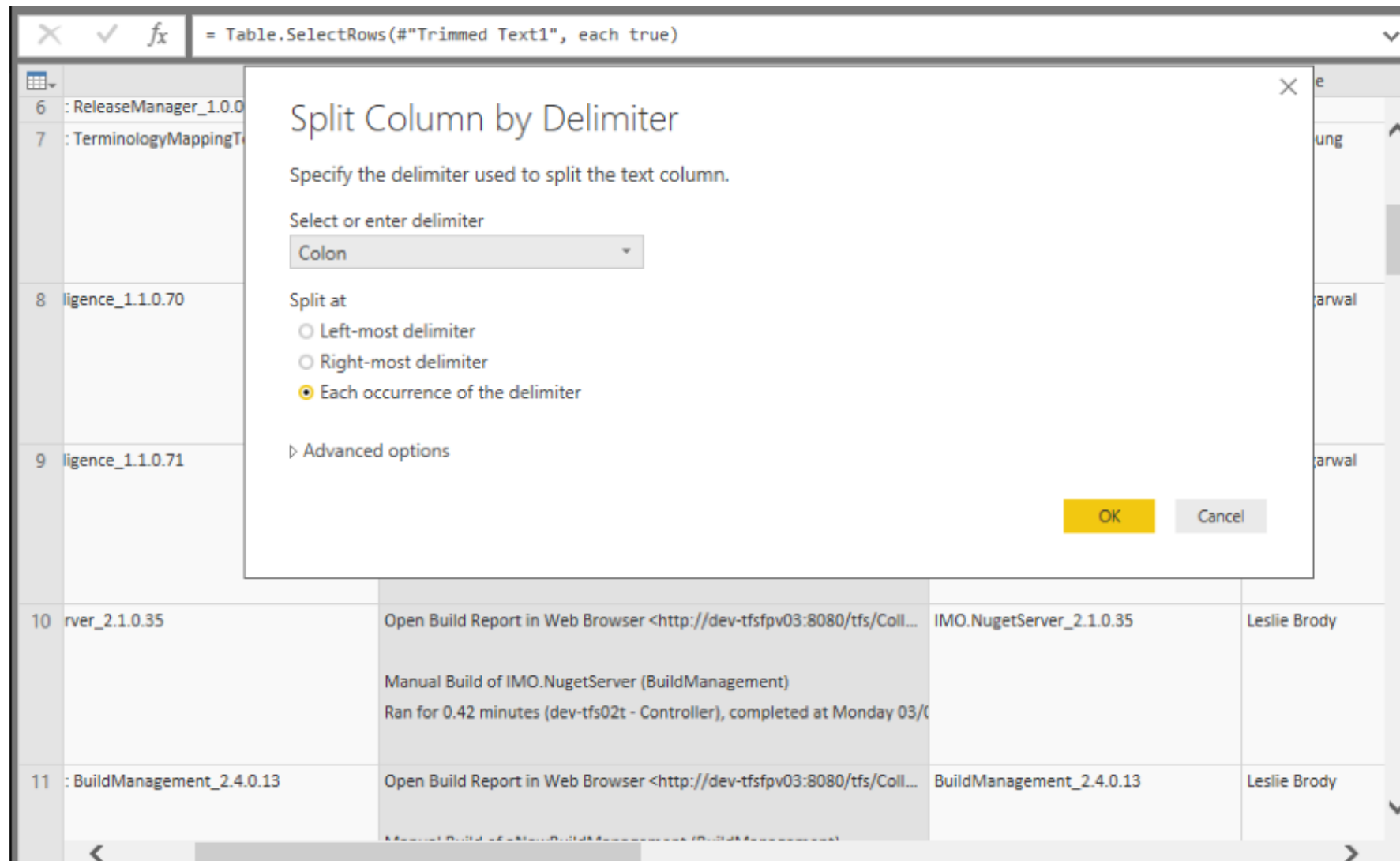 - Extract the build label from the subject column using the extract delimiter colon function.

Octopus

- Step 3:
  - □ Using split column by delimiter on each occurrence function.
  - □ Split the body column and extracted Commit Hash, Branch and Repository.

Octopus

- Step 4:
  - ☐ Exporting data from Power BI to Excel.
  - ☐ We inserted the data into tables (rows & columns) using the report functionality in Power BI and exported the data into an excel worksheet.

Successful Builds Deliverable

Build Label	Name	Branch	Full Commit Hash	CommitHash	Repository	Complete Repository URL
1.0.0+1 ▾	David Parks ▾	master ▾	fdbf30bd718011b5035dca0e5c465715 ▾	fdbf30b ▾	DevUtilities ▾	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.0+1	Tanmaya Kumar	ngEzAuth-Rewrite-Alpha	7e633486e6f4dcd872d0f37ff377c653b80	7e63348	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.3+1	Tanmaya Kumar	ngEzAuth-Rewrite-Alpha	eb8965f5507cc7b60ae9b15b5bf22228146	eb8965f	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.4+1	Tanmaya Kumar	ngEzAuth-Rewrite-Alpha	e20bd4a6bf261c49a712eceed3b2003d53	e20bd4a	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.42	Tanmaya Kumar	ngEzAuth-Rewrite-Alpha	2a579dcfe6836a364b30e68bca5e8e1613	2a579dc	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.43	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	e695272b5a817c13445387c7fb40821c5ad	e695272	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.44	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	903eb8f4816202d7aaac3893290c1d47d87	903eb8f	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.45	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	53d18756df1424c2a611c9d57489d16cf00	53d1875	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.46	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	3df7a204eacad655cf909069cde8b845cbc	3df7a20	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.48	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	321d54b2083d7dd9c96d29a264285cf764a	321d54b	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.49	Parameswara Chennup	ngEzAuth-Rewrite-Alpha	47a7396f126890f8f1899d1dfce2d5463818	47a7396	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.511	Tanmaya Kumar	ngEzAuth-Rewrite-Alpha	be8cf56b5a5224d0b58a72665f4172a2695	be8cf56	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.512	Tanmaya Kumar	5761/merge	e9abfdc1a7b48b4114a3a19ed4c392152f5	e9abfdc	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.513	Tanmaya Kumar	5761/merge	bc049ea7a06caebb8c9c33f429e6fc54007	bc049ea	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.514	Tanmaya Kumar	5761/merge	ef272241016912ee4c93f792489c0afc738b	ef27241	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.515	Tanmaya Kumar	master	a3e17612bbe10d0d9807fe011695a0b0db	a3e1761	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.516	Tanmaya Kumar	ngEzAuth-updates-beta	ce6a549e2c4eb0a1f7172942e7b7c99fc6c	ce6a549	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/
2.0.517	Tanmaya Kumar	ngEzAuth-updates-beta	ce6a549e2c4eb0a1f7172942e7b7c99fc6c	ce6a549	7c325813-e39d-4779-80c7	http://prd-tfsfpv01:8080/tfs/Collection01/DevUtilities/_git/

Future Deliverables and Conclusion

- Link JIRA ticket numbers all the way through to Octopus.
    - ☐ Lead Time
    - ☐ Progressive tracking of builds & deployments
- Look at the commits and builds we have now; see how long it took a failed build to turn into a successful build (deployments as well).
- Planning on proposing an automated way to import the data from the source and calculate the time difference between the create and end time of the issue

Thank you