

Report: Predix – The GE Machine

Jim Delforge

Brian Henzelmann

Jessica Saldana

Value Proposition

- A survey of 3 major Predix components (Core, Experience, and Data Lake) to connect the technology that makes up Predix to the GE services strategy
- Explains:
 - How technology stacks add value to a business
 - How GE leverages open source software to gain competitive advantage

Impact

- Deep understanding of the choices made when putting together the Predix technology stack
- Potential to apply innovations such as machine learning to existing GE software
- Final Report: Educational material can be posted in the GE collaborative space (colab.ge.com) to be used by GE employees to learn more about Predix

Technologies

A. Predix Core :

- Java
- Python
- Maven Server
- Node.js
- Grunt
- Bower
- Core Components

[http://predix.sw.ge.com/
content/predix-core-0](http://predix.sw.ge.com/content/predix-core-0)

- Kernel
 - Security Services
 - Business Framework
 - Application Services
 - Administrative Services
 - Kernel Services
- System Management & Monitoring
 - Cluster Management
 - Node Management
 - Service Management
 - Log Viewer

B. Predix Experience

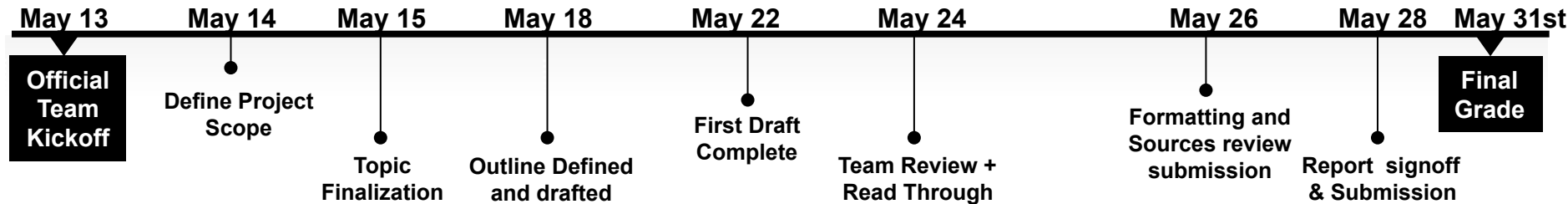
- Design Extensions
 - IIDx
 - CDx
 - HDx
 - iOSx
- Components
 - Bootstrap
 - Datagrids
 - Highcharts
 - Google Maps
 - Icons
- Predix Go
 - Cards
- iOS & Android
 - User Experience

C. Industrial Data Lake – Pivotal Hadoop -

[http://pivotal.io/big-data/
pivotal-big-data-suite](http://pivotal.io/big-data/pivotal-big-data-suite)

- Data Processing
 - Spring XD
 - Spark
 - Pivotal HD
- Advanced Analytics
 - Pivotal Greenplum DB
 - Pivotal HAWQ
- Apps at Scale
 - Pivotal GemFire
 - Redis
 - RabbitMQ
 - Pivotal Cloud Foundry -
most used, Predix 2.0 uses

Project Plan



Area	Observation	Next steps	Status	By
Consolidate Projects	<ul style="list-style-type: none"> Team restructured to include other businesses 	<ul style="list-style-type: none"> Redefine project scope + goals 	✓	May 13
Topic Formation	<ul style="list-style-type: none"> Initial topic was too broad to cover thoroughly in 20 pages. 	<ul style="list-style-type: none"> Narrowed scope from Machine Learning, Watson, + Predix to just Predix 	✓	FW 33
Outline Finalized	<ul style="list-style-type: none"> 3 major components: Predix Core, Experience, and Data Lake 	<ul style="list-style-type: none"> Analyze and Connect the major Predix components 	✓	FW 34
Segregation of Duty	<ul style="list-style-type: none"> Team to tackle the major components 	<ul style="list-style-type: none"> Consolidate and review each others work to create a consistent voice 	✓	FW34
Consolidation and review	<ul style="list-style-type: none"> Team meeting to review consolidated components 	<ul style="list-style-type: none"> Verify & confirm content with external reviewer 	→	FW 34
Formatting + Submission	<ul style="list-style-type: none"> Ensure that report meets GE confidentiality and IU standards 	<ul style="list-style-type: none"> Submit confirmed report Screen shot submission 	O	FW 35