Agile activities for patent search capabilities	
Automated prior art searches	Develop a useful and reliable pre-examination search system to assist examiners during the initial stages of evaluation and provide feedback to applicants upon filing in order to encourage amendment prior to examiner action.
Common Patent Classification (CPC) data migration	Establish a data set of CPC for existing prior art data.
CPC classification in search systems	Use CPC and CPC patent family schemes and symbols to query and narrow search results.
PE2E exploring search technologies	Develop prototypes and designs to replace the current USPTO search systems using Lucene/Solr.

Agile activities for high-value targets	
BPR eGrant	Support electronic granting of the Patent to reduce pendency.
Applicant-to-office interface	Support submission of patent applicants in structured text (XML).

Architecture & infrastructure 2.0	
Business architecture	Provide independent oversight and develop business architecture.
PE2E office action	Create office action correspondence system integrated with the PE2E platform.
Patent examination tools & infrastructure	Improvements to deployed PE2E applications.

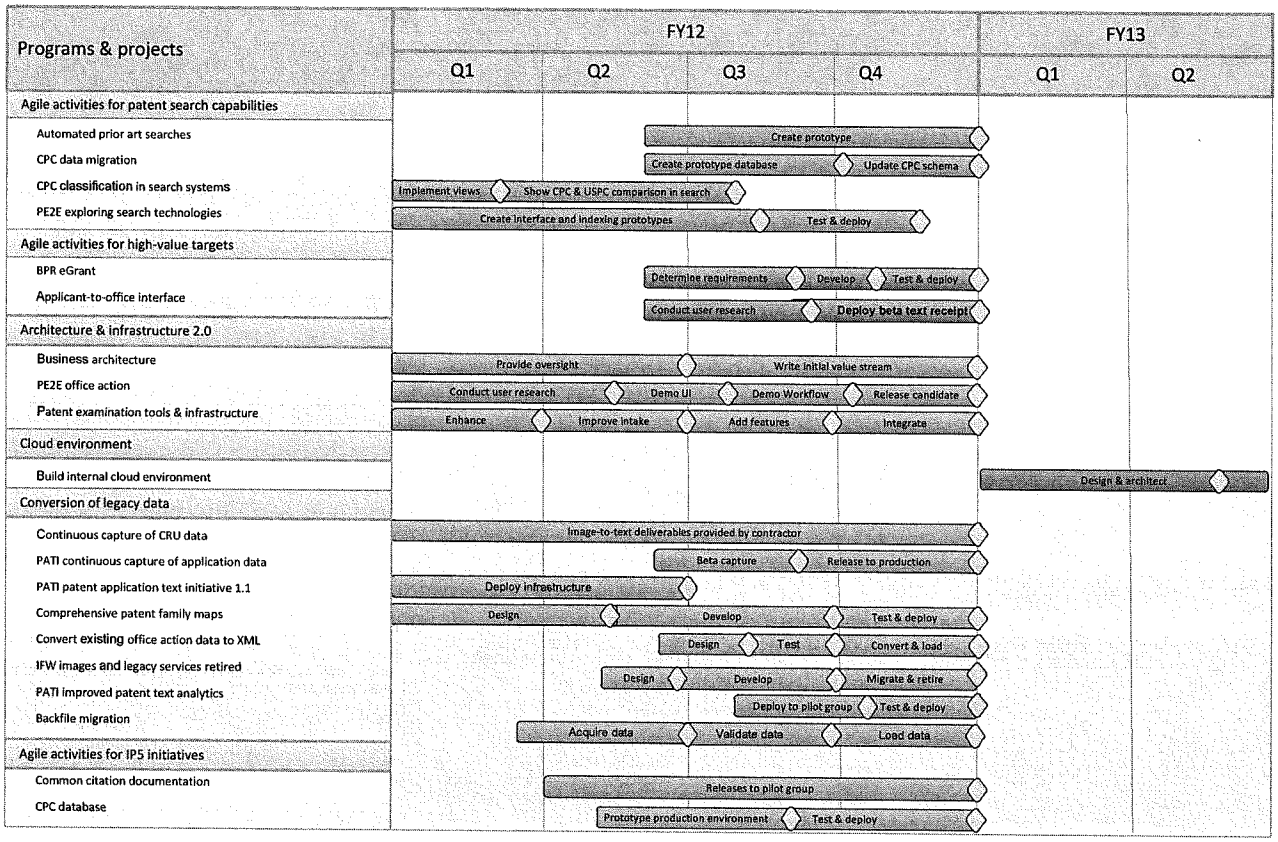
Cloud environment	
PE2E build cloud environment	Design and architect initial cloud infrastructure for PE2E

Attachment A

Conversion of legacy data	
Continuous capture of CRU data	Batch process continuous capture of CRU applications for PE2E-CRU 1.0 implementation until formal Continuous Capture is implemented
PATI continuous capture of application data	Automated, continuous conversion of 3 document types (claim, specification, abstracts) from image (PDF or TIFF) to PATI-XML text. Will be based on CRU model and would be adaptable to allow for additional document types being added over time.
PATI patent application text initiative 1.1/ Backfile migration	Release PATI 1.0 functionality to entire Patent Corps.
Comprehensive patent family maps	Graphic modeling of complex patent family relationships
Convert office action data to XML	Convert Word versions past office actions to structured text (XML)
IFW images and legacy services retired	Stabilize the database size by removing image-data from the database.
PATI improved patent text analytics	Improve automated analytics currently available in PATI

Agile activities IP5 initiatives	
Common citation documentation	Support an international database of citations for citation in patent applications.
CPC database	Enhance CPC database and supporting applications that will ultimately be synchronized between USPTO and EPO.

Patent End to End (PE2E)



Attachment A

Patents End-to-end technology stack

The Patents End-to-end (PE2E) technology stack defines the software deployed in all environments outside of the development sandboxes. Tools suitable for rapid solution prototyping may be approved on an *ad hoc* basis, provided that USPTO owns both the tool and any resulting code, the deployment occurs on the USPTO development environment, and the deliverable is intended to be experimental.

Technology need	Current solution	Anticipated, long-term changes
Operating system	Red Hat Enterprise Linux 6.x	—
File system	ext4	*TBD; may move to clustered system*
Virtualization (type 1 hypervisor)	Red Hat Enterprise Linux 6.x: KVM	—
Server provisioning	RHN Satellite 5.x	—
Virtualization management	RHEV-M 2.x	—
Load balancer	IBM Edge Server 7.x	—
Application server	JBoss SOA-P 5.1.x	—
Web server	JBoss EWS 5.1.x: Apache	—
Java servlet/JSP container	JBoss EAP 5.1.x: Tomcat	—
Object-relational mapping & persistence framework	JBoss EAP 5.1: Hibernate	—
Logging	JBoss EAP 5.1: JBoss 5.1 logging API	—
Workflow engine	jBPM 5.x	*TBD; currently in prototyping*
Rules engine	JBoss Enterprise BRMS (Drools 5.x)	*TBD; currently in prototyping*
Enterprise service bus (ESB)	JBoss ESB as part of JBoss SOA-P 5.1	—
Database	MySQL Enterprise Edition 5.5.x	—
Version control	Apache Subversion 1.6.x feeding ClearCase	ClearCase 8.0.x
Build management	Apache Maven 3.0.x feeding ClearCase	ClearCase 8.0.x
Continuous integration tool	Hudson 1.39x	Build Forge
Build artifact repository	Nexus 1.9.x feeding ClearCase	ClearCase 8.0.x
Development framework	Spring, Java EE6	—
Development IDE	JBoss Developer Studio	—
Search engine	Solr 3.3 (Lucene)	—
JavaScript toolkit	Dojo 1.6.x	—
XML parsing & transformation	JBoss JAXP 1.1, Smooks	—
Physical servers	Dell R910	—
Primary deployment language	Java 1.6	—

Please note: Versions ending in x represent the most current available minor version supported by RHEL 6. The contractor should support incremental upgrades of RHEL 6 supported minor versions (increments to portion of the version number represented as x).