



3-CUBED ARCHITECTURE AND SOFTWARE STACK

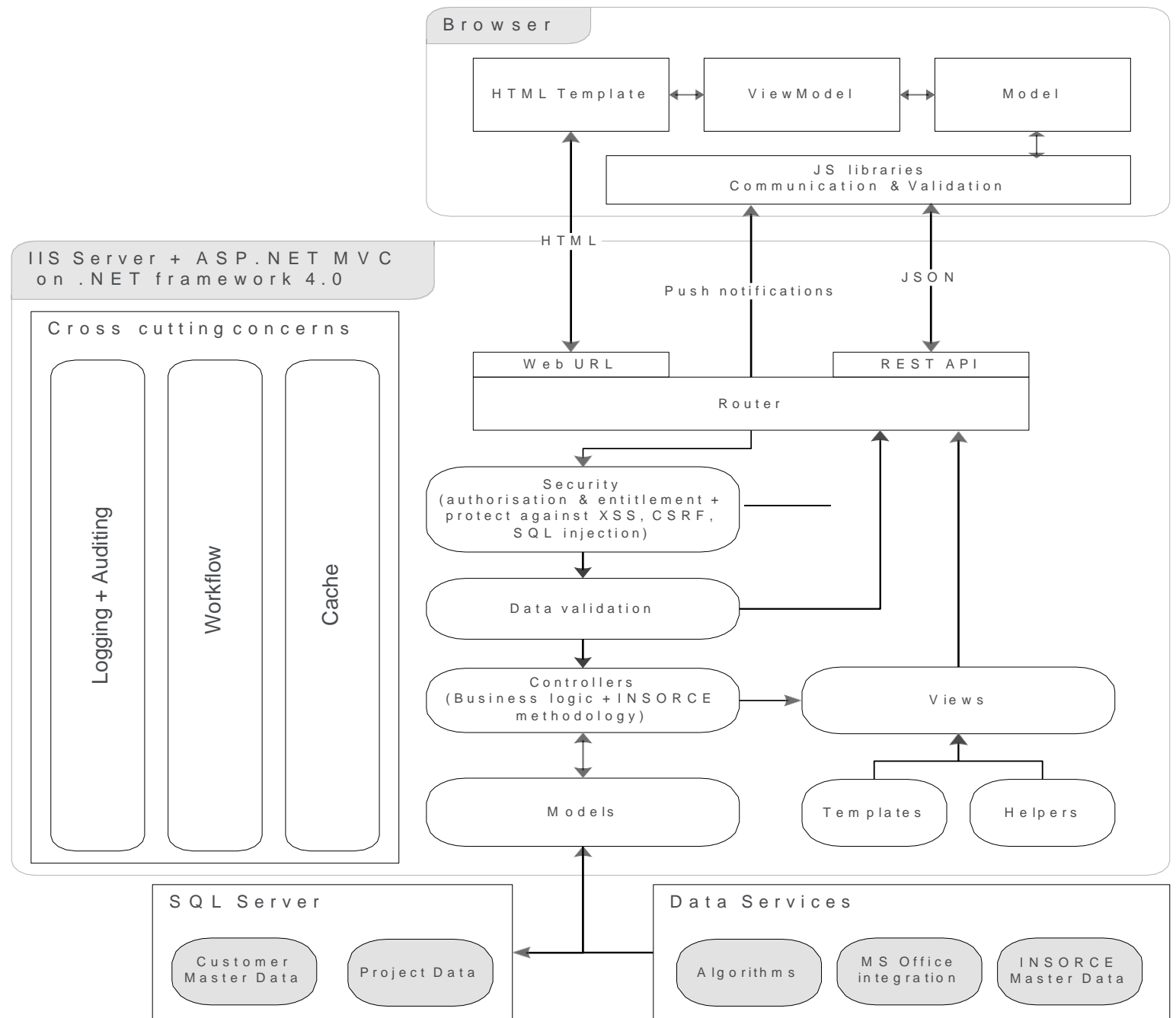
Information collected is classified as “internal”.

3-Cubed does not support input or processing of any personally identifiable information

3-CUBED ARCHITECTURE DIAGRAM

3-Cubed is based on a web-based, three-tier architecture. It follows good design principles:

- Rich JavaScript web application
- Modular
 - Business logic grouped in appropriate modules
 - Client side is based on MVVM pattern
 - Server side is based on MVC pattern
- Leverages best of breed libraries
- Follows industry best practices
 - Continuous integration
 - Automated testing



3-CUBED TECHNOLOGY STACK AND SOFTWARE REQUIREMENT

- Technology Stack
 - C# on Microsoft .Net Framework 4.0
 - ASP.NET MVC 5
 - SQL Server 2017
 - SignalR, Lucene.NET, QuickGraph
 - Knockout.js, Bootstrap, JQuery, D3.js, MxGraph
 - Matlab Compiler Runtime 2012b
- Software needed of end-user's system
 - Recent versions of browser
 - IE 10+, Chrome or Firefox
 - For editing process maps
 - MS Visio 2010 or 2013










3-CUBED INFORMATION SECURITY



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3-CUBED INFORMATION REQUIREMENT

							
INPUT	PROCESS MAP	EFFORT ESTIMATES	DELAYS AND DEADLINES	SYSTEMS & DATA FLOW	BUSINESS RULES	CURRENT CONTROLS	TEAMS & LOCATION
DESCRIPTOR	Cross functional process map for operations in scope	Guestimates of average volumes & handling times for effort	Delays and deadlines or SLAs for refinement of cycle time	Applications used and data modes for enterprise architecture –	Forms and field names for perform tasks and competence	Existing controls and control objectives for given process	Location, work timing and average compensation and seat costs
SENSITIVITY	INTERNAL	INTERNAL	INTERNAL	INTERNAL	INTERNAL/ PUBLIC	INTERNAL	INTERNAL/ PUBLIC

INFORMATION REQUIREMENT

PROCESS MAP

Level 4 cross functional process maps



UNDESIRED OUTCOMES

Identify rejection paths in process map



TEAM SIZE & HOURS

Team size, location and work hours



PRODUCT

What flows through the process



VOLUME

Daily or period volumes and decision splits



AHT

Average Handle Time for effort estimate



WAIT TIMES

Planned wait periods between activities



DEADLINES

SLAs or regulatory deadlines in process



PERIODIC EFFORT

Effort and frequency of periodic activities



SYSTEMS

Systems and applications used



FORMS & RULES

Digital or physical forms and key fields



RISK & CONTROLS

Control objectives and selection of controls



TEAM SALARIES

Average salary per team by location



SEAT COST

Cost per seat or component by location



NVA CLASSIFICATION

Aided selection of NVA type activities



BEST PRACTICES FOR “INTERNAL” DATA PROTECTION



High priority to preservation of information confidentiality and integrity



Layered approach to design and implementation of security procedures and controls



On-going analyses of security effectiveness and policies based on industry best practices for optimal protection



Independent auditor Vulnerability Assessment & Penetration Testing certification updated annually (**current audit on-going**)

3-CUBED SECURITY CONTROLS AND POLICIES

LAYER 1 PHYSICAL SECURITY	LAYER 2 NETWORK SECURITY	LAYER 3 APPLICATION SECURITY	LAYER 4 DATA SECURITY
<ul style="list-style-type: none">INSORCE hosts production servers in Amazon's EC2, Tier 4 (highest security classification) availability zone with SSAE-16 Type 2 certificationAmazon Datacenters are hosted in nondescript facilities.2-Factor authentication a minimum of 2 times for authorized staff at building perimeter and datacenter ingress points24x7x365 onsite professional security staffVideo surveillance, intrusion detection system and other electronic means to cover entire centerStrict personnel access controls, audit and detailed visitor entry logs.All employees and vendors undergo thorough background checks	<ul style="list-style-type: none">Network Security controls for client data include: Network Firewalls, IDS/IPS, Email Security, SSH KeysNetwork attack detection and prevention from Distributed Denial of Service attacksIndustry-leading firewalls and intrusion detection and prevention systemsServers are security hardened and apply automated security updates updating OS packages. System package and Application fixes are regularly tested on QA machines before applying to production servers	<ul style="list-style-type: none">Strong password settings and policies for host, network devices, application level, and administrative accountsAdministrative, non-application passwords audited quarterlyInternal and external vulnerability scans and penetration tests; third-party firms for in-depth quarterly security reviews.Two-factor access authentication (2FA) with token and user credentials. Project data visible only to the project owner and other user added by the owner.3-Cubed is served over Transport Layer Security 1.2 (TLS) using 256-bit keys. HTTP Strict Transport Security (HSTS) to ensure that all communication happens securely.Open Web Application Security Project (OWASP) guidelines during application development.	<ul style="list-style-type: none">Database access restricted to a limited set of support personnel.Data backed up daily and protected with strong encryption on disk. Backups are transferred off-site over SSH.Production data is never migrated or used outside of the production networkA Virtual Private Networking (VPN) device or equivalent when INSORCE PCs connect remotely to the production servers. SSH, or SSL encryption is used to ensure privacy.INSORCE PCs updated with OS patches, anti-virus and firewall software.