Breeze.AI Technical Architecture Deep Dive

For McCain
30-July-25

Agenda

- Context
- Semantic Engineering Team Structure and Collaboration
- Breeze.AI Framework Technical Deployment Architecture
  - Deployment Items and Dependencies (BoM)
- Breeze.AI Ecosystem Architecture
  - Ecosystem Deployable and McCain Infra and Resource Requirements
  - All Use Cases – Development and Pipeline Process (including McCain Requirements)
- Deployment Use Cases – Integration Overview
  - Required Components in McCain Target Environment and McCain Responsibilities
  - Use Cases 1 & 2 – Integration Mechanisms and McCain Requirements
  - Use Case 3 – Integration Mechanisms and McCain Requirements
  - All Use cases – Security & Compliance and McCain Support

Semantic Engineering Approach

AI-native framework designed to minimize the Manual Translation Tax

Powered By

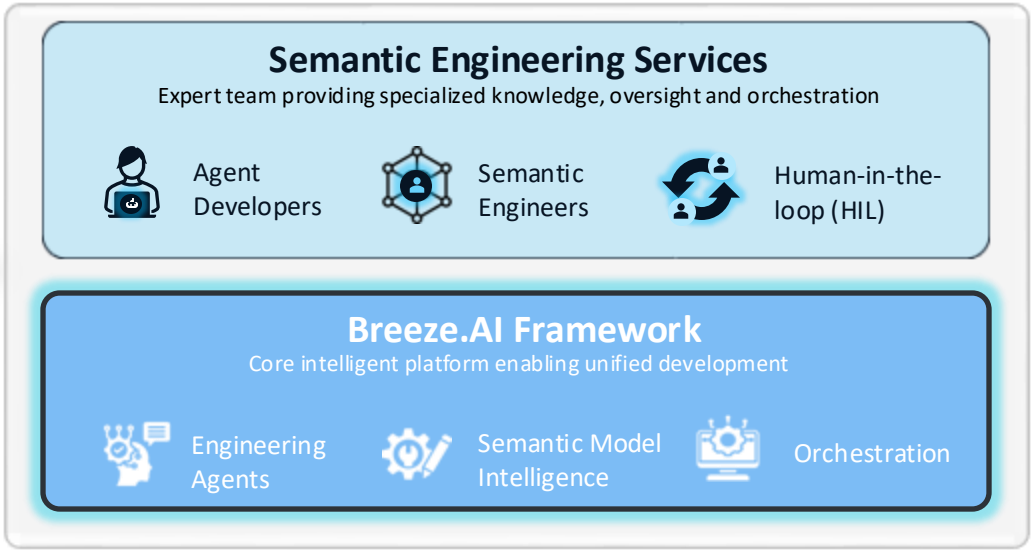
Breeze.Ai

It is a next-generation framework to transform software engineering through:

- **Unified Model:** McCain's business knowledge in AI-readable format
- **Custom Agents:** Specialized for each development phase
- **Human Validation:** McCain team stays in control

Address the Root Causes:

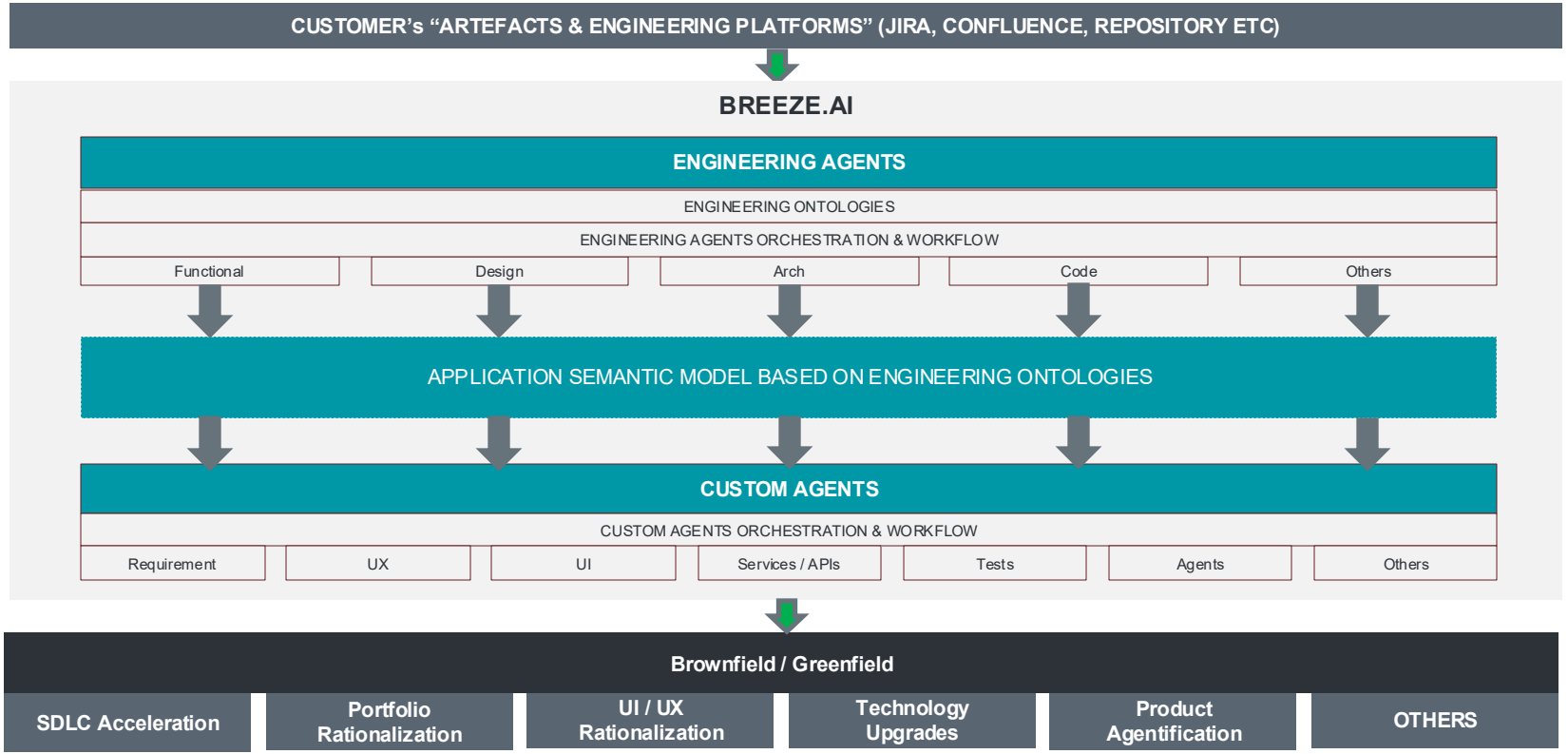
- Replaces manual handoffs with **automation**
- Translates intent into **implementation**
- **Validates** outcomes continuously
- Preserves the **Context**



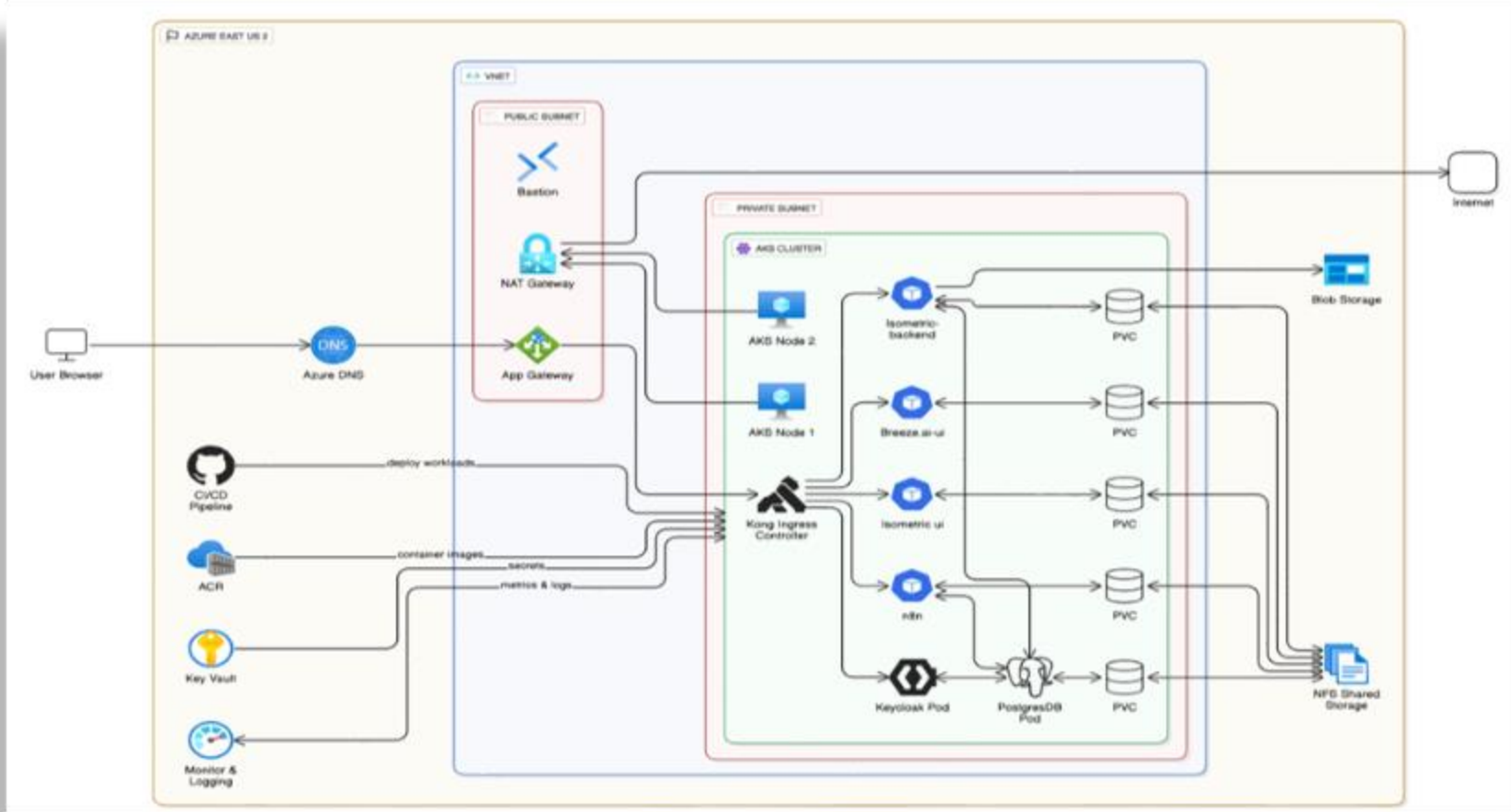
Team Structure of Semantic Engineering Team

Layer	Role	Resource Type
Human In the Loop (HIL)	Requirements + Validation	McCain Team
Semantic Engineers	AI Orchestration + Code	Accion Dedicated
Agent Developers	Custom AI Agents	Accion Shared
Breeze.AI Framework	Core Technology	Accion IP

Breeze.AI Schematic View



Technical Architecture – Breeze.AI Framework



Deployment Items and Dependencies

Breeze.AI Framework Includes:

- **External LLMs** - Open API, Anthropic Claude, Gemini – used interchangeably based on best suitability to agent task
- **Orchestration engine** - N8N (Community version)
- **Identity and Access Management** - KeyCloak (Open source)
- **Agent Persistence** – Azure DB for PostgreSQL / Open source

MS Azure Core Services:

- AKS: Kubernetes cluster management
- Azure VMs: Worker node instances
- Azure Disk Storage: Persistent volumes for applications
- Azure Blob Storage: Object storage for documents and assets
- Azure DNS: Domain name resolution and health checks
- Azure Key Vault: Certificate and secrets management
- Virtual Network: Network isolation and security
- Azure Monitor: Logging and monitoring integration

External LLM Access and Subscriptions

- OpenAI
  - Type of Subscription – API
  - Phase 1 Projected tokens usage – 30M input/8M output tokens
  - Phase 2/3 Projected tokens usage – 15M input/16M output tokens
- Anthropic Claude
  - Type of Subscription – 1 Team Subscription (min 5 users)
  - Phase 1 Subscription – 2 Users
  - Phase 2/3 Subscription – 5-10
- Gemini
  - Type of Subscription – API
  - Phase 1 Projected tokens usage – 7M input/4M output token
  - Phase 2/3 Projected tokens usage - 14M input/8M output token

Ecosystem Deployable and Requirements

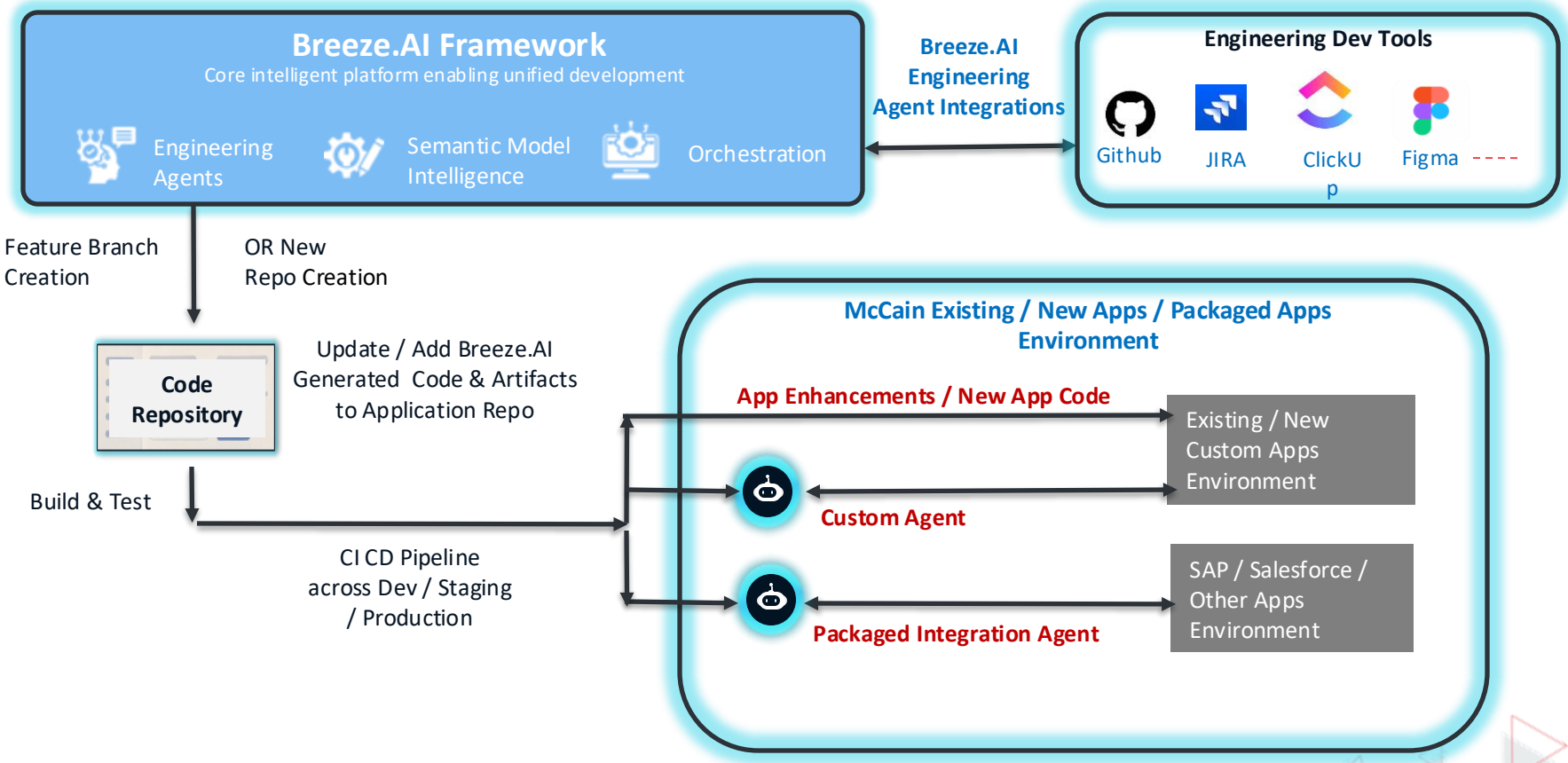
Deployment Items

- Orchestration Engine
- Kong API Gateway
- PostgreSQL Database
- Neo4j Database
- Keycloak Authentication Service (Optional)
- Vector Database (Included in PostgreSQL)
- Message Queue (Optional - e.g., RabbitMQ)
- Local LLM Instance (optional)

McCain Ecosystem Infra and Resource Requirements

Category	Requirements
DevOps Platform	Azure DevOps/GitHub Enterprise, CI/CD pipelines, Build agents, Security scanning tools
Kubernetes Infrastructure	Dev/Staging/Production AKS clusters, Namespace management, Network policies
Source Control	Repository hosting, Branch protection, Pull request workflows, Code review processes
Data Management	Test databases, Production-like staging data, Package system test environments
Specialized Teams	SAP Basis team (25% time), Salesforce admin (20% time), Integration team (40% time)
Security & Compliance	Change approval workflows, Security review checkpoints, 24/7 monitoring setup

Breeze.AI Ecosystem Architecture



All Use Cases - Development and Pipeline Process

Pipeline Stage	Brownfield (Enhancement)	Greenfield (New Applications)	Package Integration (SAP/Salesforce etc)	McCain Requirements
1. Agent Development	• Develop agent using Semantic Engineering • Train with App context • Test against semantic model	• Develop full-stack agents • Create application scaffolding • Generate initial codebase	• Develop SAP/Salesforce discovery / integration agents • Create integration mappings • Build orchestration logic	None (Accion responsibility)
2. Packaging /Setup	• Create deployment package • Generate integration specs • Document API contracts	• Create new repository • Initialize with generated code • Set up branch protection	• Configure SAP OData services • Set up Salesforce Connected App • Create integration users	• Repository creation rights • SAP Basis team (Packaged Int) • Salesforce admin (Packaged Int)
3. Code Integration	• Branch repository • Add agent integration endpoints • Update application APIs	• Provision new AKS namespace • Configure databases • Set up networking	• Deploy Azure API Management • Configure Logic Apps • Set up Event Grid	• Repository access • AKS cluster access • Azure integration services
4. CI Build	• Build application + agent • Run unit tests • Security scanning	• Build new application • Run unit tests • Security scanning	• Deploy to dedicated cluster • Configure package connectors • Test integrations	• Azure DevOps pipeline • Build agents • Test frameworks
5. Dev Deployment	• Deploy to development AKS • Agent-app integration testing • Functional validation	• Deploy to development AKS • Application testing • Functional validation	• Test SAP/Salesforce connectivity • Validate data flows • Performance testing	• Dev AKS cluster • Test data • Package system test environments
6. Staging Deployment	• Deploy to staging environment • End-to-end testing • User acceptance testing	• Deploy to staging environment • End-to-end testing • User acceptance testing	• Integration testing • Business process validation • Performance testing	• Staging AKS cluster • Production-like data • UAT team availability
7. Production Deployment	• Blue-green deployment • Production monitoring • Performance validation	• Production deployment • Application monitoring • Performance validation	• Phased production deployment • Monitor package integrations • Validate business processes	• Production AKS cluster • Change approval process • 24/7 monitoring

Deployment Use Cases – Integration Overview

Aspect	Use Case 1: Brownfield	Use Case 2: Greenfield	Use Case 3: Package Integration
Description	Incremental development of existing McCain applications (e.g., MDI)	Development of completely new McCain custom applications	Integration and orchestration with SAP, Salesforce, and other packaged software
Target Systems	Existing Custom Applications	New Manufacturing Apps, Digital Innovation Projects, Modern Cloud-Native Solutions	• SAP S/4HANA & BW • Salesforce Sales/Service Cloud • Third-party Enterprise Software
Integration Protocols	• REST APIs (enhancement endpoints) • Database Direct (schema updates) • Event Bus (change notifications) • File System (code generation)	• REST APIs (new service creation) • Database Direct (new schemas) • Event Bus (service orchestration) • Container Deployment (new apps)	• OData/REST (SAP services) • RFC/BAPI (SAP native protocols) '• SOAP/REST (Salesforce APIs) • Platform Events (real-time sync)
McCain App Requirements	• API endpoint exposure • JWT authentication setup • Database connection permissions • Event subscription capability	• Container orchestration readiness • CI/CD pipeline integration • Service mesh configuration • Database provisioning	• OData service exposure (SAP) • Connected App setup (Salesforce) • Integration user accounts • API Management configuration
McCain Infrastructure Needs	• AKS cluster expansion • Enhanced API Gateway • Event Bus setup • Cache layer addition	• New AKS cluster • Modern API Gateway • Event-driven architecture • Container registry	• Azure API Management • Logic Apps for workflows • Event Grid for routing • VPN/Private endpoints

Required Components in Target McCain Env – All 3 Use Cases

Component	Purpose	Azure Service	McCain Responsibility
Agent Runtime	Execute custom agents	AKS Cluster	Provision cluster, node management
Agent Database	Store agent data & cache	PostgreSQL/Azure Database	Database provisioning, backup configuration
Workflow Engine	Process orchestration	N8N on AKS	Container deployment, persistent storage
Authentication	Secure agent access	Keycloak/Azure AD	Identity provider setup, user management
API Gateway	Request routing & security	Kong/Azure API Management	Gateway configuration, policies
Message Bus	Event-driven communication	Azure Service Bus	Topic creation, subscription management

Use Case 1 & 2 – Application Integration Mechanisms

Interface Type	Protocol	Use Case	McCain Requirements
REST APIs	HTTP/HTTPS + JWT	CRUD operations, data access	Expose application APIs, implement authentication
Database Direct	PostgreSQL/SQL Server	Data analysis, schema updates	Database connection strings, read/write permissions
Event Bus	Azure Service Bus/Event Hub	Real-time notifications, async processing	Event topic configuration, message schemas
File System	Azure Blob Storage	Code generation, document processing	Storage account access, file permissions

Use Case 3 – Packaged Integration Mechanisms

System	Interface Type	Protocol	McCain Requirements
SAP Systems	OData Services	REST/HTTP	Expose OData endpoints, service user accounts
	RFC/BAPI	Native SAP protocols	RFC user credentials, function module access
	Database Direct	SQL/HANA	Database connection, read permissions
Salesforce	REST API	HTTPS + OAuth	Connected app setup, API permissions
	SOAP API	HTTPS + Session Auth	Integration user credentials
	Platform Events	Real-time messaging	Event channel configuration
Azure Integration	API Management	REST + Policies	APIM instance, routing policies
	Logic Apps	Workflow automation	Logic App creation, trigger configuration

All Use Cases - Security & Compliance

Aspect	Implementation	McCain Responsibility
Network Security	VPN/Private Endpoints	Configure network access, firewall rules
Data Encryption	TLS 1.3 in transit, AES-256 at rest	Certificate management, key rotation
Access Control	OAuth 2.0/JWT tokens	User provisioning, role assignment
Audit Logging	Comprehensive activity logs	Log retention policies, compliance reporting
Secrets Management	Azure Key Vault integration	Vault setup, secret rotation policies

Q & A

Looking forward to partnership with McCain!

For More Information, Please Contact:

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Intellectual Property Ownership

Component	Ownership	Rights
McCain-Specific Assets	McCain owns	• Customized agents and semantic models • Complete source code • Full modification rights
Breeze.AI Framework	Accion owns	• Read-only access during engagement • Full source code transfer available • Modified open source license terms
Industry Components	Shared/Reusable	• Accion retains rights to reuse generalized components • McCain cannot redistribute core framework

Risks and Mitigations

Risk	Our Guarantee
Performance	30% acceleration or Accion loss
Quality	<2% defect rate + 90-day warranty
Automated deliveries	Gradual approach + continuous validation
Adoption	Human-in-loop maintains team control
Vendor Lock-in	Technology transfer after 12 months

BOTTOM LINE

- Accion bears delivery risk (Outcome-Based)
- McCain protected with guarantees
- Technology transfer ensures long-term value

Terms & Conditions

Engagement Terms:

- 6-month minimum commitment
- 30-day notice after initial period
- Net 30 payment terms

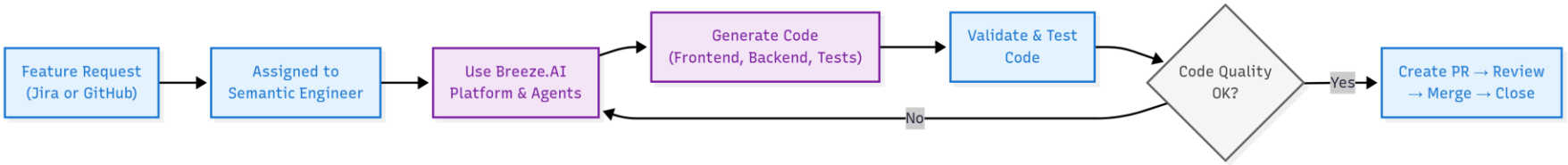
CRITICAL REQUIREMENTS

- 20+ feature backlog for first 6 months
- Product owner: 4-6 hours/week
- Full environment access: Week 1
- Deployment authority: McCain approval

RATES (2025)

- Agent Developer: $45/hour
- Semantic Engineer: $50/hour
- HIL Engineer: $55/hour

Typical Code Development workflow



External Agent Deployment Scenarios

- Breeze.AI Engineering Agent – Breeze.AI Environment
- Code Enhancements or New Code – McCain Application Environment
- External Agent - Deploy to Independent Cluster