# Tech Stack Coverage Matrix

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## Tech Stack Coverage Matrix - BBB needs to HubSpot and BAW

| Layer | Examples of Tools | Used For | BBB has/will have | HubSpot System Coverage | BAW System Coverage |
|---|---|---|---|---|---|
| **CRM / Front Office** | HubSpot, Salesforce | Sales outreach, marketing campaigns, lead forms | Yes | **Tool:** HubSpot CRM<br><br>**Coverage:** HubSpot Marketing & Sales Hubs | |
| **CMS** | HubSpot CMS, Shopify CMS, AEM | Content and asset management | Yes | **Tool:** HubSpot CMS<br><br>**Coverage:** HubSpot Content Hub | |
| **Process Automation** | IBM BAW, AWS Lambda, EventBridge | Multi-step business workflows, approvals, RPA/IPA | Yes | | **Tool:** IBM BAW<br><br>**Coverage:** IBM BPM (engine), Process Modeler, Workflow Automation |
| **Operational Data Model (System Database)** | DynamoDB, Azure SQL, PostgreSQL | Real-time transactional logic, source of truth for app data | TBD<br><br>**Tool:** Azure SQL?<br><br>**Coverage:** Looking at internal tech team or ETG Team to stand one up | TBD | IBM BAW interacts with operational DBs via data connectors but does not serve as a DB itself |
| **Commerce Layer** | Shopify, Magento, Composable | Product catalog, shopping cart, and checkout | TBD<br><br>Product, Catalog, Order, Inventory, and Fulfillment Management not yet in scope | **Tool:** Quote and Invoicing<br><br>**Coverage:** HubSpot Commerce Hub early stages (good for quotes, invoices) | Not directly supported by BAW |
| **Payments Layer** | Stripe, Shopify Payments | One-time transaction processing | Planned<br><br>**Tool:** Current Gravity payment processor and NMI payment Gateway<br><br>**Coverage:** ETG | Not handled by HubSpot — external integration required (HubSpot + Stripe) | Not handled by BAW |

| | | | Coverage: ETG team? | | |
|---|---|---|---|---|---|
| **Subscription Payments Layer** | Braintree, Shopify Subscriptions | Recurring billing, subscription plans | TBD | Stripe (default api integration with HubSpot), does not yet support subscription model | Not supported natively by BAW — external tool integration needed |
| **AI Layer** | watsonx Orchestrate, OpenAI, Pinecone, LangChain | LLMs, agents, RAG, automation, content generation | In Progress<br>**Tool:** Watsonx Orchestrate, WatsonxAI<br>**Coverage:** Internal tech team | | BAW supports orchestration with AI agents via APIs |
| **Middleware Layer** | n8n, Zapier, Boomi, AWS API Gateway | System orchestration, API routing, automation logic, async data sync | Yes | **Tool:** Custom<br>**Coverage:** HubSpot custom middleware<br>Middleware connects HubSpot BAW internal DBs. BAW acts as a process orchestrator, not an iPaaS | **Tool:** Custom<br>**Coverage:** HubSpot custom middleware<br>Middleware connects HubSpot BAW internal DBs. BAW acts as a process orchestrator, not an iPaaS |
| **Integration Layer** | Custom APIs, Zapier, n8n | Workflow automation, API orchestration, and cross-system data sync | Yes | **Tool:** Custom<br>**Coverage:** Custom integrations exist via BAW workflows and HubSpot APIs | **Tool:** Custom<br>**Coverage:** Custom integrations exist via BAW workflows and HubSpot APIs |
| **Data Warehouse** | Snowflake, Redshift, BigQuery | Canonical model, KPI tracking, dashboards | Planned<br><br>**Tool:** Snowflake<br>**Coverage:** Internal tech team | | |
| **Data Lake** | S3, Snowflake | Raw/unstructured data storage for AI, LLMs, logs, backups | Planned<br><br>**Tool:** Snowflake<br>**Coverage:** Internal tech | | |

| | | | team | | |
|---|---|---|---|---|---|
| **Reporting & Analytics** | Power BI, Looker, Tableau, HubSpot Reports | Dashboards, business insights, strategic metrics | Yes<br>**Tool:** Power BI<br>**Coverage:** Internal Tech Team | **HubSpot Reports:** front-end engagement | **BAW:** Business Automation Insights (BAI) for process data |
| **Tracking & Attribution** | GTM, GA4, Segment, Amplitude, Mixpanel | Behavioral analytics, attribution, funnel tracking | Yes<br>**Tool:** GTM, AEM, GA4<br>**Coverage:** Internal Tech Team | Managed through HubSpot + GTM | Not covered by BAW |
| **Customer Support & Customer Surveys** | Zendesk, Freshdesk, Kustomer, InMoment | Help desk, ticketing, customer issue resolution | Some coverage<br>**Tool:** InMoment, Custom-built<br>**Coverage:** Internal teams | **Tool:** HubSpot Customer Support<br>**Coverage:** HubSpot Service Hub | BAW could manage escalated case workflows via Case Management features |

# HubSpot Capabilities Matrix

## HubSpot Capabilities

| HubSpot Tool | Mapped Layer(s) | Used For |
|---|---|---|
| **Sales Hub** | CRM / Front Office<br><br>Process Automation<br><br>Reporting & Analytics | Managing contacts, deals, pipelines, sequences, task automation, and reporting for sales reps. |
| **Marketing Hub** | CRM / Front Office<br><br>CMS<br><br>Process Automation<br><br>Reporting & Analytics<br><br>Tracking & Attribution | Creating and executing campaigns, forms, emails, landing pages, nurturing workflows, and tracking UTM and campaign performance. |
| **Content Hub** | CMS<br><br>Tracking & Attribution | Building and managing blogs, pages, gated content, and CTAs, including embedded analytics and content performance. |
| **Operations Hub** | Process Automation<br><br>Integration Layer<br><br>Middleware Layer | Automating field updates, property logic, syncing data between platforms (e.g., Salesforce, Gmail), and building simple logic flows. |
| **Commerce Hub** | Commerce Layer<br><br>Payments Layer | Creating and managing quotes, invoices, Stripe payment links; managing paid/unpaid statuses. |
| **Breeze AI** | AI Layer | AI-powered email content generation, suggestions for reps, and content assistance (early stage — not orchestration or agent-based yet). |
| **Service Hub** | Customer Support | Managing support tickets, feedback surveys, ticket pipelines, and service-based workflows. |

## HubSpot Capabilities Mapped to Architecture Layers

| Layer | HubSpot Hub / Tool | Coverage & Description |
|---|---|---|
| CRM / Front Office | Sales Hub, Marketing Hub | Manages contacts, deals, pipelines, campaigns, email sequences, forms |
| CMS | Content Hub | Hosts landing pages, blogs, site modules, CTAs, gated content |
| Process Automation | Operations Hub, Workflows | Limited to CRM-centric workflows (e.g., deal stage changes, emails). Doesn't support multi-role or complex BPM |
| Operational Data Model | – | Not a relational database; HubSpot CRM is not suitable for complex object relationships or transactional data |
| Commerce Layer | Commerce Hub | Early-stage; good for quotes, invoices, and Stripe payment links but lacks full catalog/cart logic |
| Payments Layer | Commerce Hub + Stripe Integration | Can process payments via Stripe. Great for simple one-time transactions |
| Subscription Payments Layer | – | Not natively supported. Requires external tools like Chargebee, Braintree, ReCharge |
| AI Layer | Breeze AI, AI Content Assistant (beta) | Breeze AI generates email copy and suggestions; still early-stage. No orchestration, RAG, or agentic behavior |
| Middleware Layer | – | Not middleware. HubSpot does not route between systems but can be connected to tools like n8n or Zapier |
| Integration Layer | Operations Hub (Data Sync) | Native integrations and sync for some CRMs and tools; limited compared to custom iPaaS solutions |
| Data Warehouse | – | Not a DW. Some reporting can be exported, but for real data modeling, external DW is needed |
| Data Lake | – | No raw or blob storage support. Not suitable for LLM/RAG applications |
| Reporting & Analytics | Marketing Hub Reports, Sales Reports, Custom Reports | Basic dashboards and attribution reporting within HubSpot objects |
| Tracking & Attribution | Marketing Hub + GTM Integration | Tracks opens, clicks, UTM source |

| Tracking & Attribution | Marketing Hub + UTM Integration | Tracks opens, clicks, UTM source, and ties to contact records. Can integrate with GA4, Segment, etc. |
|---|---|---|
| Customer Support | Service Hub | Manages tickets, feedback surveys, and basic help desk flows. No deep case logic or SLA management |

# IBM BAW Capabilities Matrix

## IBM BAW Capabilities

| BAW Tool | Mapped Layer(s) | Used For |
|---|---|---|
| IBM BPM | Process Automation | Core engine for business workflows and approvals |
| Operational Decision Manager (ODM) | AI Layer (Rules) / Process Automation | Automating complex rules and policy decisions |
| FileNet Content Manager | CMS (internal-facing content/documents) | Document storage, retrieval, and compliance |
| Business Automation Insights (BAI) | Reporting & Analytics | Process-level dashboards and performance tracking |
| Process Modeler | Process Automation | Visual BPMN-based modeling of business workflows |
| Case Management | Customer Support / Process Automation | Handling complex, multi-stage customer or business cases |
| Workflow Automation | Process Automation | Automating recurring or event-driven tasks |
| System Data Toolkit | Operational Data Model / Integration Layer | Accessing shared business objects and connecting to data |
| Custom Task Pages (UI) | CRM / CMS | Customizing rep and internal UI for task flows |

## IBM BAW Capabilities Mapped to Architecture Layers

| Layer | BAW Tool / Capability | Coverage & Description |
|---|---|---|
| CRM / Front Office | Custom Task Pages (UI), Case UIs | Internal use only; not designed for customer-facing sales or marketing activities |
| CMS | FileNet Content Manager | Used for document storage and internal content workflows (not public-facing content or marketing pages) |
| Process Automation | IBM BPM, Workflow Automation, Process Modeler | Core strength; BAW is built to handle complex multi-role workflows, approvals, task routing |
| Operational Data Model | System Data Toolkit | Reads/writes to external databases; does not store core records internally (not a DBMS) |
| Commerce Layer | – | Not supported; BAW is not a transactional commerce system |
| Payments Layer | – | No native payments processing; must be integrated externally |
| Subscription Payments Layer | – | Not supported; external billing tools required |
| AI Layer | ODM (Operational Decision Manager), AI APIs | Business rules engine and can call external AI (e.g., watsonx) but not an AI platform itself |
| Middleware Layer | Workflow Service Components, Event Listeners, App Connect (optional) | Supports service orchestration and message queueing; relies on external connectors or APIs |
| Integration Layer | System Data Toolkit, REST/SOAP Connectors | Well-supported; integrates with databases, APIs, queues for sync and automation |
| Data Warehouse | – | BAW does not serve as or output to a DW directly (data export needed) |
| Data Lake | – | No native support for storing raw or unstructured data |
| Reporting & Analytics | Business Automation Insights (BAI) | Provides process-level dashboards and insights, not enterprise-wide BI |
| Tracking & Attribution | – | Not built for web tracking or attribution; best paired with analytics tools like GA, HubSpot |
| Customer Support | Case Management | Designed for managing internal and external cases with stages, |

| | | and external cases with stages, escalation logic, and approvals |
| --- | --- | --- |

## IBM BAW Integration & Middleware Capabilities Mapped to Layers

| BAW Tool / Capability | Mapped Layer(s) | Used For |
| --- | --- | --- |
| System Data Toolkit | Integration Layer | Accessing shared business objects and connecting to external systems (e.g., CRM, SQL DBs) |
| Custom REST/SOAP Connectors | Integration Layer | Integrating with external APIs (e.g., HubSpot, internal services) for synchronous data flow |
| Message Queues (e.g., Kafka, MQ) | Middleware Layer | Handling async communication between BAW and other systems (event-based triggers, decoupled flows) |
| Event Listeners / Triggers | Middleware Layer | Listening for external system events or file drops to initiate BAW workflows |
| Business Automation Workflow Runtime APIs | Middleware Layer | Enabling real-time status checks, task assignments, workflow transitions from external tools |
| Custom Adapters / Integration Services | Integration & Middleware Layer | Wrapping external logic in callable modules for reuse inside BAW flows |
| IBM App Connect / iPaaS (optional companion) | Middleware Layer (external) | Visual orchestration of APIs and logic — often used in enterprise BAW deployments as a service bus |
| Workflow Service Components | Middleware Layer | Orchestrating multi-step service calls (internal + external) within BAW process models |