

A TECHNICAL GUIDE BY SMARTSPACE.AI

Revolutionising AI Integration for Technology Partners

Introduction

A Platform for Rapid AI Deployment in Enterprise Environments

System integrators need efficient and reliable AI solutions to stay competitive and serve the growing client demand for AI integration and solutions to drive better business outcomes.

SmartSpace is your ideal partner for building and implementing AI quickly and effectively. Our plug-and-play infrastructure transitions you from concept to execution in minutes. This allows you to get your customers to value quicker, safer, and with seamless iteration at their fingertips.

With SmartSpace, you can rapidly deploy AI solutions, spending your time on what matters—bringing generative AI solutions to life—rather than using valuable developer time on building infrastructure. We handle the infrastructure complexities, allowing you to focus on developing impactful AI solutions and delivering exceptional results over a long project lifecycle.

Our platform provides flexibility and adaptability, ensuring data security and compliance while scaling to meet your clients' needs. You can customise SmartSpace to each client's requirements, tackling the low-hanging fruit in a client's generative AI roadmap while working together to harness AI's full potential for long-term operational excellence.

SmartSpace is the backbone of AI deployment, simplifying and enhancing your AI deployment capabilities to lead to transformative business outcomes. Build a successful AI practice with SmartSpace at its core, leveraging our technology to innovate with your customers and expand your competitive edge.

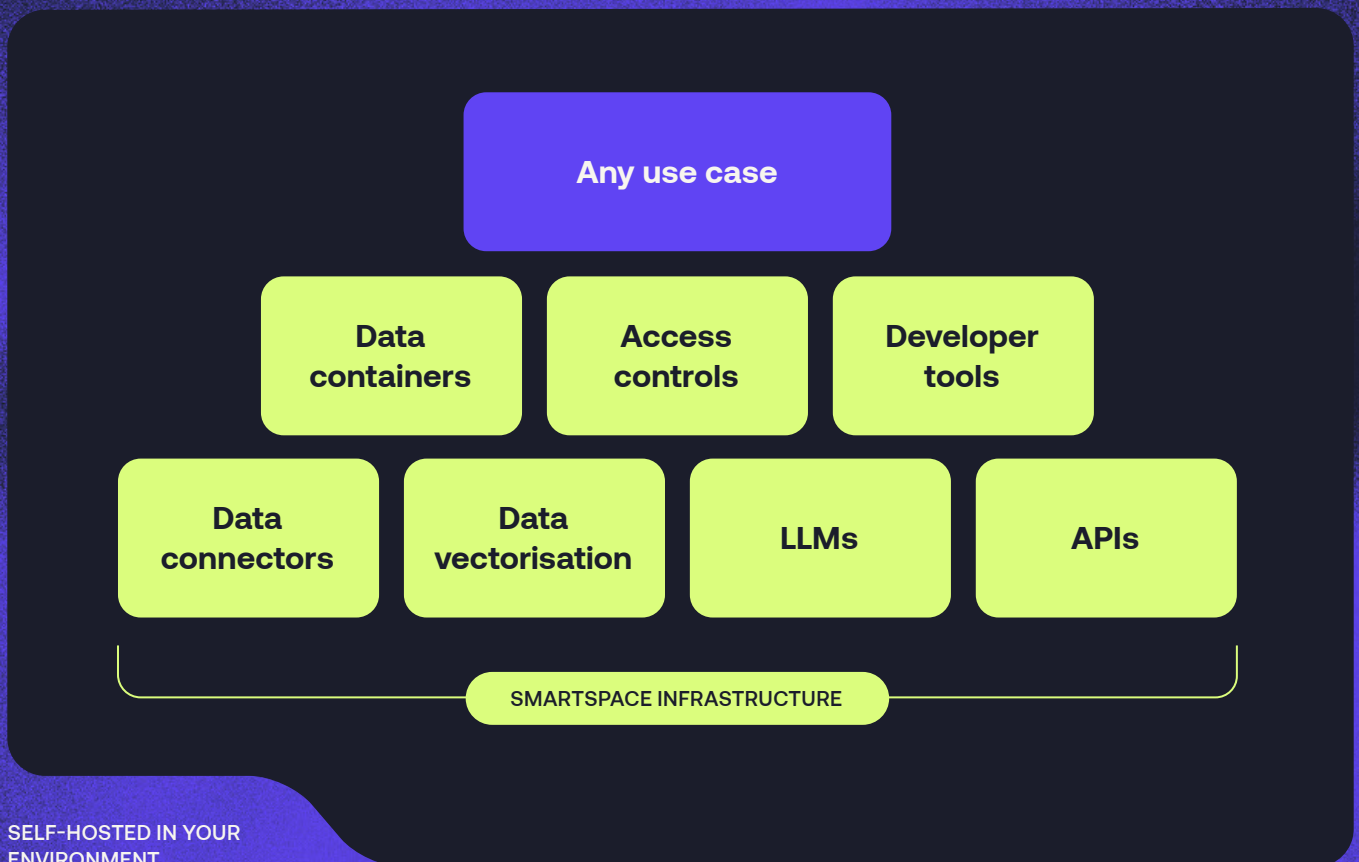
The SmartSpace Platform: Build Insights, Not Infrastructure

At the core of the SmartSpace Platform is our orchestration engine, which enables you to bring AI workflows to life. We've taken care of all the essential building blocks so you don't need to build them yourself.

Achieving higher degrees of efficiency and flexibility is crucial for delivering maximum value at the lowest cost when orchestrating AI workflows. SmartSpace simplifies this process by providing infrastructure that includes data connectors, data containers, vectorisation, access control, developer tools, multi-agent collaboration, and an LLM marketplace—

all managed through robust automation and orchestration deeply embedded in the platform. We'll explain these in more detail later in this document.

The entire platform is API-driven, allowing you to configure, deploy, and maintain your system through code and using continuous integration and continuous deployment pipelines. By handling the complex infrastructure, SmartSpace allows you to focus on creating intelligent workflows and leveraging generative AI to drive operational excellence with your clients.



SELF-HOSTED IN YOUR
ENVIRONMENT

Technical Advantages of SmartSpace

SmartSpace acts as the backbone of Generative AI development, coordinating the AI development lifecycle like an “orchestra conductor.” As a vendor-neutral centralised hub, SmartSpace efficiently manages the development, deployment, integration, and administration of AI applications, ensuring seamless and successful deployments.



SELF HOSTED

One of SmartSpace’s key features is that it is self-hosted in your own environment, ensuring complete control over your data. This approach enhances security, compliance, and privacy, allowing businesses to leverage AI without compromising sensitive information.



POWER TO BUILD

Unlike low-code/no-code tools, SmartSpace offers full codability, empowering developers to build their generative AI use cases without restrictions.



ABILITY TO CUSTOMISE

SmartSpace lets you customise infrastructure beyond the limitations of typical SaaS tools, tailoring your AI deployment to meet your unique needs.



DEVELOPER FRIENDLY

Simplify your deployments with SmartSpace, whether you prefer deploying via script or leveraging a user-friendly admin portal.



SPEED TO DELIVER

SmartSpace accelerates your development process, allowing you to focus on building tools rather than building infrastructure.

Rapid Prototyping and Production-Ready Deployments

Did you know that 60% of POCs never make it into production? Common barriers include limitations in team capability, low-code tools, and lack of access to flexible production tools. Our foundation partners have shared that with SmartSpace, they can bring POCs to life in days rather than weeks, with much less risk and cost involved for clients.

With SmartSpace, you can enhance your chances of project approval and client acquisition, paving the way for larger programs of work while freeing up resources to gain more market share.

Our platform enables you to quickly prototype and develop sophisticated AI solutions, demonstrating immediate value to clients and stakeholders. By leveraging SmartSpace, you can showcase innovative, high-impact solutions that are ready for production, positioning yourself as a reliable partner in your clients' digital transformation efforts.



Rapid Prototyping

SmartSpace significantly speeds up the prototyping phase, allowing you to quickly test and refine generative AI models and use cases. The platform's flexibility and advanced customization options enable developers to iterate rapidly, bringing innovative ideas to life faster. This capability allows businesses to efficiently respond to customer requirements, experiment with real data, and conduct low-risk, cost-effective experiments. With SmartSpace, creative concepts can be turned into tangible results, setting the stage for more complex, production-ready solutions.



Production-Ready Deployments

SmartSpace integrates infrastructure and workflows with a robust framework that supports complex use cases, such as multi-agent systems, custom tools, and integration with external systems. This capability allows for the creation of sophisticated, production-ready deployments that integrate directly into your client's infrastructure without additional setup. Whether designing bespoke Retrieval-Augmented Generation (RAG) solutions or creating a multi-agent workflow with your own tools, SmartSpace can help with even the most complicated use cases efficiently.

SmartSpace Core Platform Components



Workspaces

At the core of SmartSpace are workspaces. Each use case is attached to a workspace, a dedicated environment where data and AI models come together to address specific business challenges (insert your use case here).

Within a workspace you connect your data, configure your LLM models, set access controls, and more to enable each use case. Every workspace is accessible through an API endpoint, allowing you to plug it into your applications, data pipelines, or automations as its own service.



Data Sources and Connectors

Connectors in SmartSpace allow you to sync and organise data from multiple sources seamlessly. Whether it's from Azure Storage, SharePoint, or HubSpot, our native connectors hold the necessary credentials for data access and keep your data flowing smoothly into your workspaces.

Additionally, SmartSpace allows you to build your own connectors, enabling you to integrate with any data source you need. This flexibility ensures that no matter what data you need to connect with, SmartSpace has you covered.



Data Spaces

Think of Data Spaces as logical containers where data from multiple platforms can be combined, stored, and processed for being used in workspaces. When setting up a Data Space you pick and choose the specific data you need from each of your connectors, based on your use cases. This sets up a data sync job in the background that continuously monitors and updates the data from those sources. As new data comes in, the platform automatically vectorizes its content and stores it in an AI search index, ready to be used in your workspaces.

Data Spaces can be used across multiple workspaces, allowing you to reuse common sources of data without any extra work. Each workspace can be hooked into multiple Data Spaces, meaning you can stack modular datasets as needed without having to create new ones.



Large Language Models (LLMs)

Using our LLM Library, you can connect to multiple models from multiple providers. Store API credentials for providers like OpenAI, Anthropic, Google Gemini, and any other API-driven LLM. We provide the ability to also deploy local models through the HuggingFace model marketplace with automatic virtual machine creation and model loading. Connect and use these local LLMs just like any other model for the ultimate in data privacy.

Connect, use, and change models within workspaces through a simple button click or code change. Each workspace can be configured with multiple LLMs depending on the use case, across multiple providers and models. Control the model's system instructions and parameters for complete control over outputs.

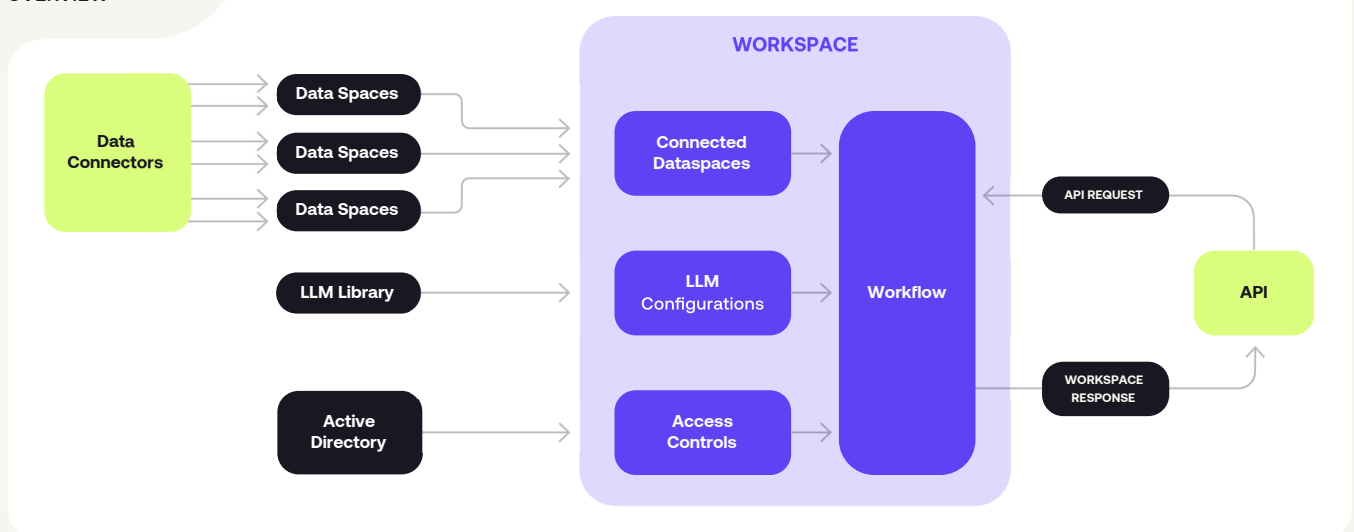


APIs and User Interface

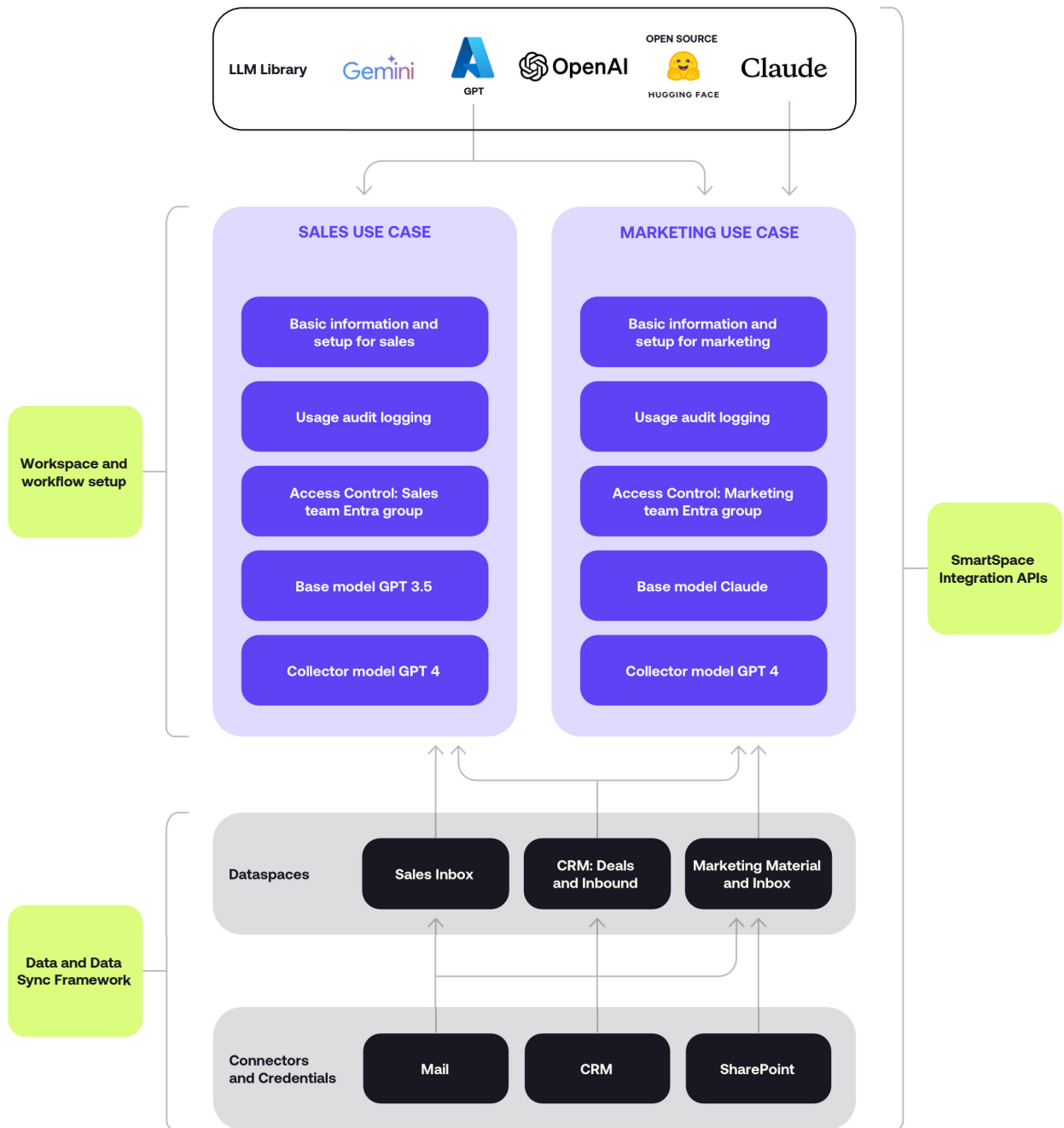
SmartSpace is API-driven from the core. Configure connectors, Data Spaces, Workspaces, LLM models, Access Controls and more from our Config API. Deploy entire configurations using a custom CI/CD pipeline for dynamic and code-driven solutions. Interact with workspaces and message threads using our Chat API. Workspaces can be called individually and plugged into applications and other external services.

Out of the box SmartSpace provides web interfaces for an Admin Portal and a chat interface. These allow you to quickly hit the ground running with setting up connectors, dataspace, and workspaces and can even be shared with less technical administrators who can use the Admin portal to manage and create their own simple use cases. The chat interface is useful for both testing purposes and providing a playground for enterprise clients to start using workspaces. Because access control is built in, there's no extra work needed to get entire teams onboard and using their own walled garden spaces.

WORKSPACE ARCHITECTURE OVERVIEW



DETAILED WORKSPACE ARCHITECTURE WITH EXAMPLE USE CASE SETUP



The SmartSpace Workflow Framework – unlocking use cases

To build your use cases within the SmartSpace environment, you will use our Workflow Framework to design, test, and deploy them. The Workflow Framework allows you to create specific workflows that meet the requirements of each use case. We provide a developer SDK library that includes our block system. Each block can be configured with specific inputs, outputs, and capabilities, giving you the flexibility to tailor your workflows precisely to your needs.

Examples

For example, you can use an “LLM” block. This block takes in a message input and returns a LLM response output. The block pulls in the LLM model configuration from the connected SmartSpace workspace when deployed. This way you separate out the configuration from the logic, allowing you to deploy a solution and test multiple models + providers easily through simple configuration updates in the workspace.

Or create a documents search block, that can query across the Data Spaces in the workspace to return relevant documents you pass to the next step of the workflow. Because the data connection happens seamlessly when deployed, you can reuse the exact same workflow in multiple workspaces or clients without having to reconfigure this connection.

Deployment

Build your blocks, then define the connections between them, all through code. Once completed you can deploy this “flow definition” into a specific workspace. When the workspace is triggered, it will follow your deployed flow definition for each request.

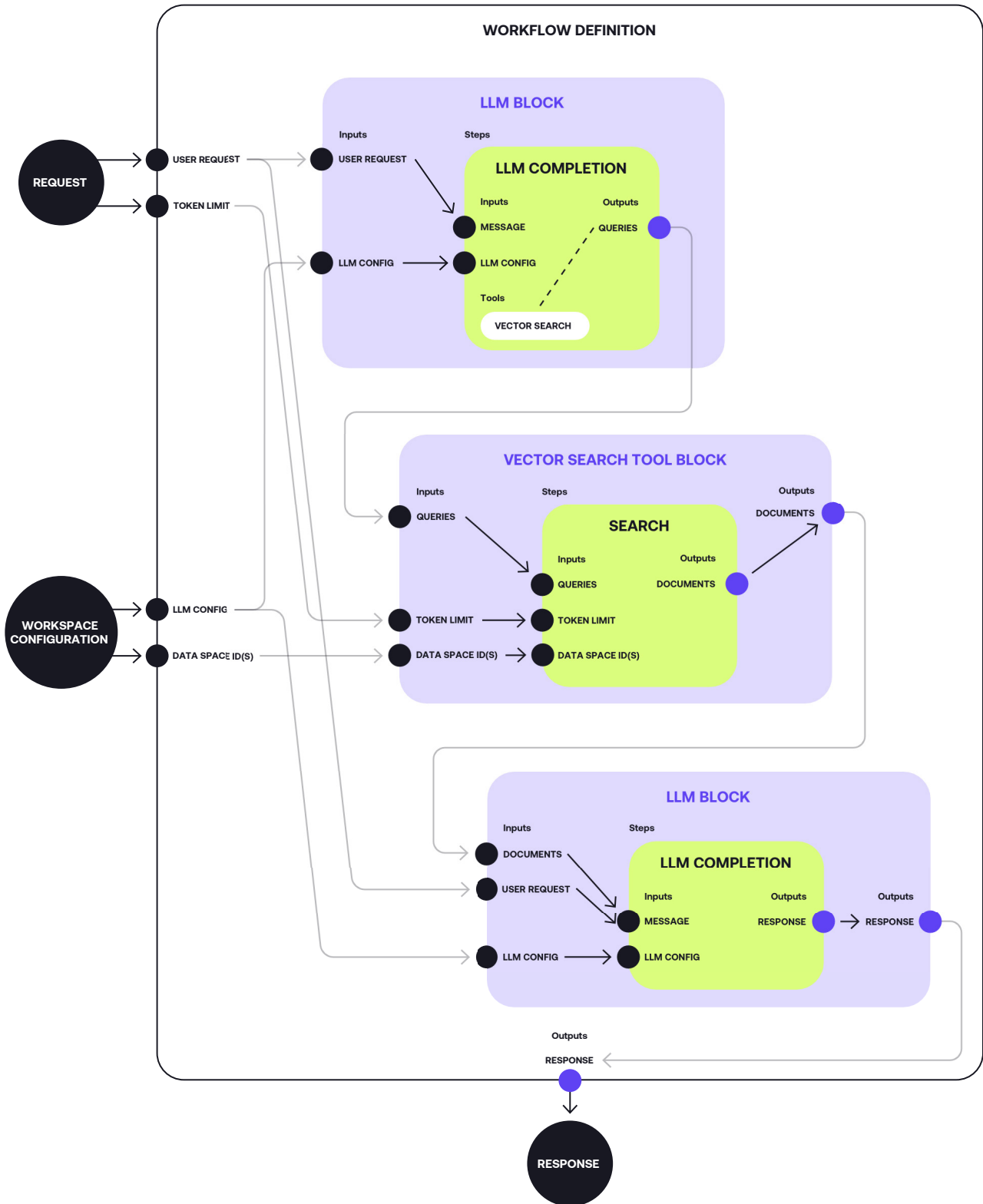
The flow will automatically connect to the resources it needs within the workspace environment and maintain access controls without you having to do any extra configuration.

Interactive

The Workflow Framework also allows you to have interactive flows where you gather additional input from human users. Using structured JSON schemas you can create dynamic interfaces with an application interface to gather the required information.

Once returned the flow will pick up exactly where it left off, as the state of each step of the flow is saved and can be paused and resumed at any point.

EXAMPLE WORKFLOW DEFINITION
OF A SIMPLE VECTOR SEARCH



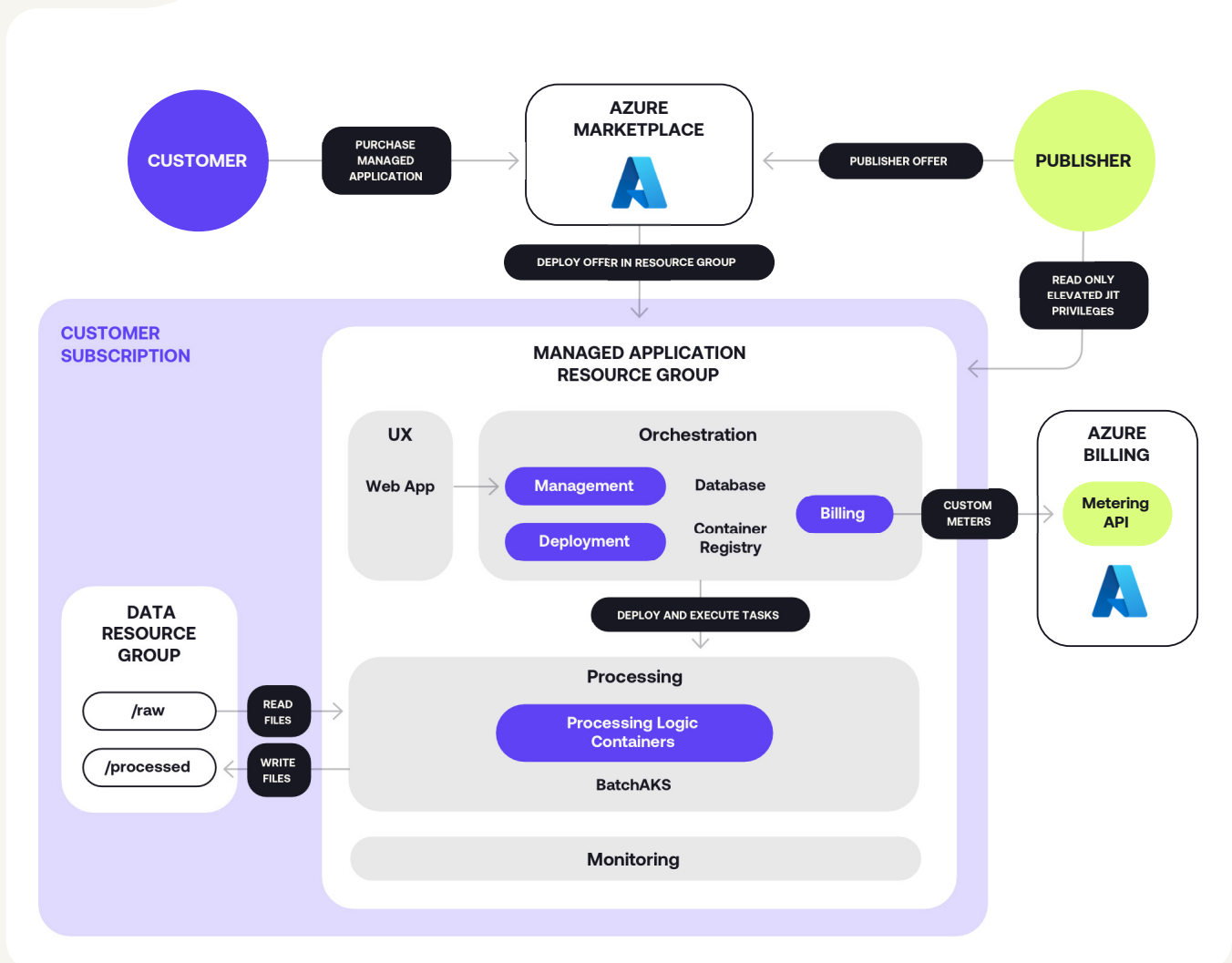
Deep dive into the SmartSpace Stack

Let's dive deeper into the SmartSpace Stack and understand how it seamlessly integrates into your enterprise environment.

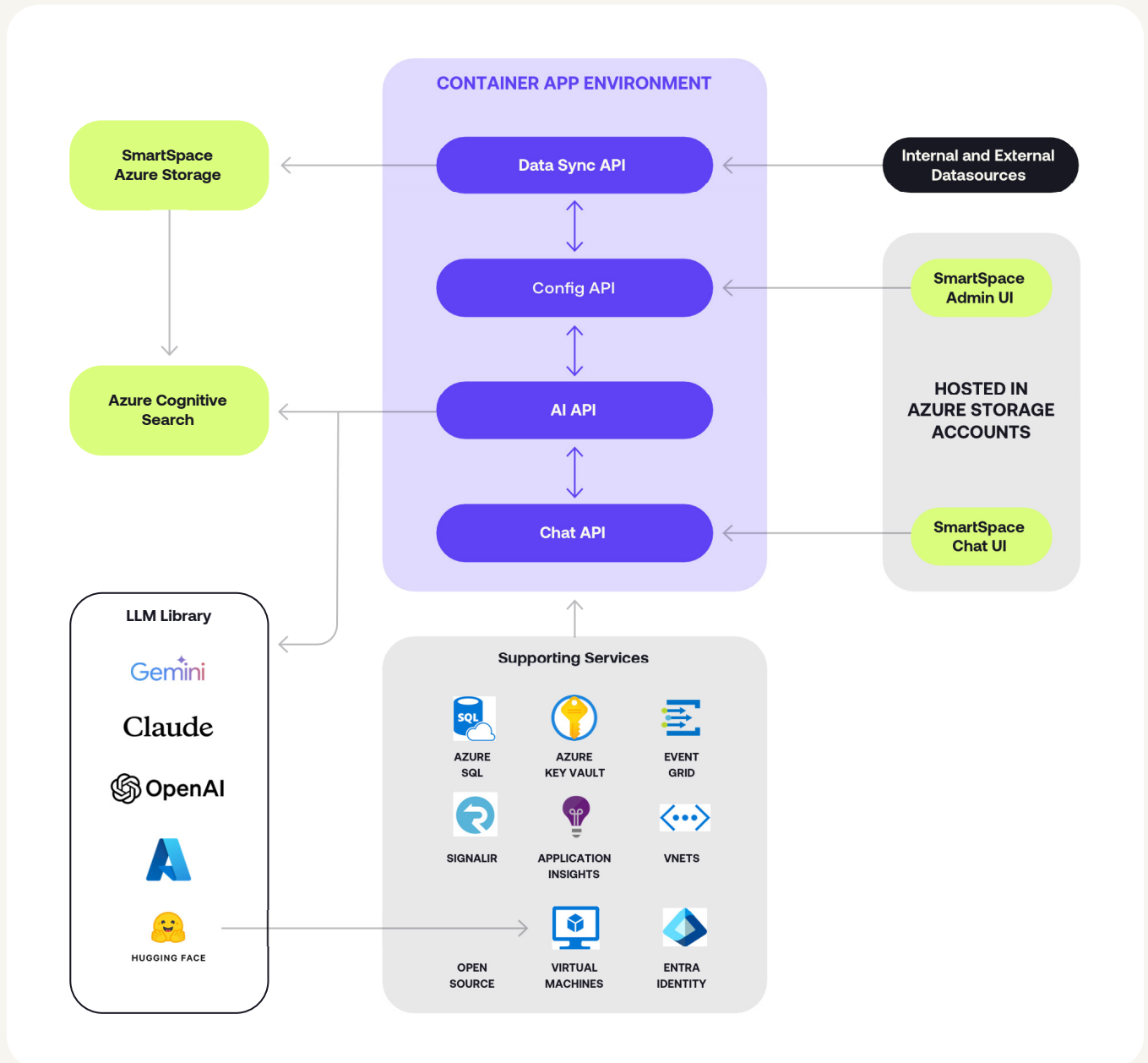
This diagram shows how easily SmartSpace integrates into your enterprise through the Azure Marketplace. With just a few clicks, you can deploy SmartSpace within your Azure subscription, utilising its powerful orchestration, processing, and monitoring capabilities.

Enjoy a user-friendly interface, robust data management, and seamless billing integration, all while maintaining top-level security and control. Improve your business efficiency and innovation with SmartSpace's straightforward deployment, leveraging Azure's reliable infrastructure for excellent performance and scalability.

SMARTSPACE STACK



Here is what it looks like after that deployment process is done.



This diagram highlights the robust architecture of SmartSpace, seamlessly integrating with your enterprise environment. By leveraging a container app environment, SmartSpace connects to both internal and external data sources through powerful APIs, including Data Sync, Config, AI, and Chat APIs.

The platform uses Azure Cognitive Search and integrates leading LLM libraries like OpenAI, Gemini, and Hugging Face, ensuring top-tier AI capabilities. Supporting services such as Azure SQL, Key Vault, SignalR, and Virtual Machines enhance performance, security, and scalability. Experience improved efficiency and innovation with SmartSpace, fully leveraging Azure's ecosystem to transform your enterprise workflows.

Bringing it all together - The SmartSpace Setup



As a system integrator, you'll be guiding your clients through the seamless integration of SmartSpace into their enterprise environment. This section shows how all the pieces fit together that you've learned throughout this technical document, providing a step-by-step process from initial installation to full deployment.

1 Install

Deploying SmartSpace is straightforward and can be done directly from the Microsoft Azure Marketplace, allowing integration into your secure environment. Start by navigating to the Azure Marketplace, searching for SmartSpace.ai, and clicking 'Create' to begin the installation. The deployment process takes about 30 minutes. Proper configuration during setup is crucial to ensure optimal performance, so be sure to follow the provided guidelines and pre-installation steps. Once deployed, SmartSpace provides a robust platform to enhance your business processes with AI.

2 Connect Data

Using the Data Connectors, add your different data sources into the system. Next, create your Data Spaces using these connectors. Data Spaces can be set up across multiple connectors to bring all the data into its own unique container. Setting up a Data Space creates a sync job in the background that automatically syncs new documents, vectorises their contents, and stores them in an intelligent AI search index.

3 Select and configure LLMs

With our LLM Library, you can connect to various LLM providers and set up the LLM models you want to have available. Choose from leading API-driven providers like OpenAI, or use our open-source option to spin up a Virtual Machine and load a model from the HuggingFace marketplace.

4 Set up workspace

The workspace is where everything comes together. Connect to your Data Spaces, code and deploy your workflow definitions, and configure your LLM models, including system instructions and parameters like temperature. Set access controls using connected Entra identities or Azure Service Principals.

5 Start using workspace

Once fully configured, each workspace can be called at its own endpoint, allowing for seamless integration into your applications and interfaces. With detailed logging, you can track each request and response, as well as debug each step of your workflow.

Conclusion

SmartSpace offers system integrators a comprehensive, flexible, and efficient platform for integrating generative AI into client environments. With robust orchestration capabilities, a self-hosted setup, and extensive customization options, SmartSpace enables you to deliver impactful AI solutions swiftly and securely. By leveraging SmartSpace, you can focus on developing innovative applications and driving operational excellence for your clients, while we handle the complex infrastructure. We look forward to partnering with you to transform your clients' AI initiatives and achieve remarkable business outcomes.

Next Steps

01

Become a SmartSpace Partner

Join our partner program and start integrating SmartSpace into your client solutions.

02

Explore Our Developer Documentation

Dive into our comprehensive developer documentation on our knowledge base to understand all the technical details.

03

Start Planning Your AI Practice

Begin envisioning how SmartSpace can support and enhance your AI initiatives, creating value for your clients.

04

Book a Demo or Technical Deep Dive

Schedule a demo or a technical deep dive to learn more about SmartSpace and meet our team.

05

Request a Developer Instance

Request a developer instance to evaluate SmartSpace and see its capabilities firsthand.

Scan the QR code for next steps



smartspace.ai