AIS
APPLIED INFORMATION SCIENCES

MEETING NEW NEEDS QUICKLY
With COVID Response Solutions on Power Platform

Amid a worldwide pandemic, a global health and humanitarian organization responsible for monitoring public health risks, coordinating health emergency response, and promoting human health and wellbeing urgently required a pandemic response solution. In May, the client engaged with Microsoft to build a healthcare solution management application in a matter of weeks. Microsoft brought in their leading Power Apps Partner, AIS, to lead the effort.

Challenge
The organization needed a solution to centralize and streamline the process of managing healthcare solutions and coordination amongst medical experts, healthcare providers, and government officials in many countries as part of its global pandemic response.

Solution
AIS architected, developed, and deployed a secure health solutions management application and digital marketplace built on Power Platform using Power Apps, Power Apps Portals with Azure Active Directory, Power Automate, API integration, and Microsoft Dataverse.

Results
Healthcare solutions are created and listed by providers, vetted by medical experts, and made available to public health officials through a seamless portal delivered in record time to support global users. AIS took the solution from design on a (virtual) whiteboard to global deployment in over 150 countries in exactly one month.

Build a solution to instill trust

It was early in the pandemic; people were scared, chaos and uncertainty were rampant, and a lack of global trust was evident. Without a way to vet and validate health solutions from other countries, pandemic response officials couldn't be sure whether those solutions would help or hurt patients in receiving countries.

There's also the matter of availability. Certain solutions were only available in limited regions; modern solutions could not be accessed based on existing infrastructure, and there were often language barriers between providers and recipients.

Powering a pandemic response with a nimble platform

The organization chose Power Platform for their healthcare solution management given the urgency and scope of their needs. Power Platform delivers speed to market for enterprise-grade software development to meet new demands quickly.

The solution needed to connect global users, build trust, and work where it needed to. With Power Platform, we can quickly build variations of applications to meet user needs, such as a slimmed-down experience for low bandwidth regions or offline access.

Uniting Doctors, Providers, and Government for pandemic response
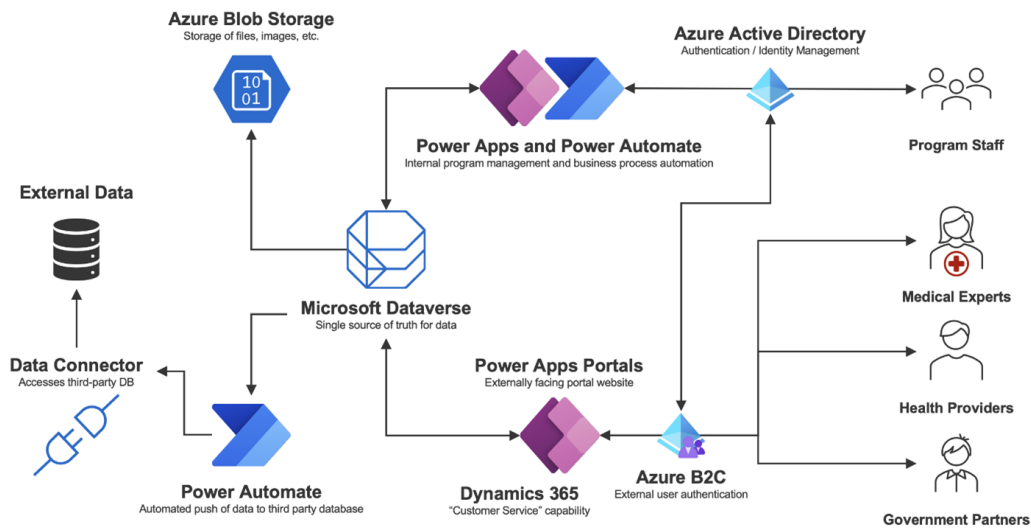
The 30-day implementation included platform and workflow design, architectural build-out, and solution deployment.

Security was top of mind, with global users spanning four key roles: public health stakeholders, solution providers, medical experts, and system stakeholders. Guest users were created in Azure Active Directory upon approval, with automation workflows to provide guidance on system access.

The solution allows providers to submit their listings, which go through three rounds of external and internal review before final assessment and publishing to the public. We used Microsoft Dataverse as a single source of truth for health product and solution data produced to support pandemic response. Any unstructured data such as evidentiary documentation or videos accompanying listings is stored in Azure Blog Storage.

Automated workflows copy data from Dataverse to other systems as needed as solutions are submitted using an API request. Power Apps and Power Automate manage all back-end processes. Power Automate pushes data to pre-existing databases that consume the information produced in the solution. These external databases and applications catalog all global health solutions within the organization's purview, not just specific to the pandemic.

The architectural design below shows the solution workflow.

Azure Blob Storage
Storage of files, images, etc.

External Data

Data Connector
Accesses third-party DB

Power Apps and Power Automate
Internal program management and business process automation

Microsoft Dataverse
Single source of truth for data

Power Automate
Automated push of data to third party database

Dynamics 365
"Customer Service" capability

Power Apps Portals
Externally facing portal website

Azure B2C
External user authentication

Azure Active Directory
Authentication / Identity Management

Program Staff

Medical Experts

Health Providers

Government Partners

Power Apps Portals for external users

The externally facing application serving healthcare providers, medical experts, and government partners is presented via a "Digital Marketplace" approach, where a front-end application built on Power Apps Portals runs an externally facing website for those outside of the organization. This is paired with Microsoft Dynamics for Customer Service to manage the entire experience. The site contains content on COVID-19, help and FAQ, information about the Digital Marketplace, feedback options, and registration as a member, reviewer, or provider. External users are authenticated using Azure B2C to keep information secure.

Powerful products for fast, secure solution requirements

AIS quickly answered pandemic response teams' needs with the robust and flexible functionality of Power Platform and Azure. The world moves quickly today, requiring technology solutions that can keep up. Modernize, sunset legacy apps, meet new business needs and empower your teams with agility. The combined power of Microsoft cloud platforms and an industry-leading services integrator like AIS can help your organization build secure, enterprise-grade solutions that can move at the speed of your mission.