Amadeus delivers a comprehensive approach to acquiring, enriching, analyzing, and presenting actionable clinical and claims data, as well as non-traditional data. The scalable and open platform supports population health management initiatives, value-based care models, and provides healthcare professionals with real-time cognitive support at the point of care.
Amadeus is a highly scalable and open platform built on modern technology that aggregates all types of health data, from both traditional (e.g., claims, clinical) and non-traditional (e.g., behavioral, medical devices, social, multi-omics, etc.) sources.

Amadeus supports your journey from population health management to precision medicine. Amadeus' API management layer allows third-party developers to build new capabilities and specialty applications on the platform, creating an innovative healthcare ecosystem.

Benefits of Amadeus

**Highly Scalable**
Amadeus combines Orion Health's extensive data integration and HIE experience with the distributed architecture to handle massive volumes of high-velocity data. The scalable platform pairs a comprehensive range of data models—including clinical, claims, consumer, and multi-omic—with powerful, custom data-modeling capabilities.

**Advanced Privacy**
Advanced, granular privacy capability provides controlled access to patient information based on user roles and the sensitivity of patient data. The privacy module provides a single, simple user interface that helps organisations easily create advanced privacy rules even in the most complex healthcare environments.

**Support Innovation with APIs**
Amadeus provides secure access to all its data via APIs to Orion Health as well as third-party applications. Open APIs creates an application ecosystem that breaks down data silos and fosters innovation, enabling the best applications to be developed for every healthcare scenario.

**Adapt to New Care Models**
Drawing patient-centric data to Amadeus enables healthcare organisations to make informed decisions regarding the move from traditional payment to alternative payment models. Payers, ACOs, and other organisations involved in value-based models can support their participating providers with value-added services.

**Future-proof and Pluggable Architecture**
With exceptional experience in making data useful, ingestion and data exchange, Amadeus is a proven versatile data platform. Designed for population health management, the platform also future proofs organisations for emerging models of care through to precision medicine.

**Foundation for Population Health and Precision Medicine**
Health determinants, in isolation, are interesting. In combination, they're powerful. Aggregating huge volumes of different data and surfacing it in a complete patient record is what Amadeus does best, and precision medicine is only possible when we have the complete picture of an individual's health. Through seamless integration with our care-management and patient-engagement applications, Amadeus allows you to proactively identify, manage, and transition at-risk patients in real time, closing gaps, increasing satisfaction, and lowering costs while improving care quality.

**Intelligent**
Amadeus enables predictive modeling that identifies and stratifies risks in a population and drives rapid decision-making. Additionally, Amadeus will enable the operationalisation of machine learning, enabling predictions based on its large data sets.
Capture and Analyse Big Data to Improve Healthcare and Transform the Health of Populations.

Capture and Store Massive Volumes of Data
Built using the latest storage technologies and a distributed processing architecture, Amadeus is unparalleled in its ability to extract maximum value from today’s data and prepare organisations for exponential data growth.

Access All Types of Patient Data in One Place
The Amadeus data pipeline distributes the processing of data to enable true scaling and consumption of data from all possible sources. It handles all of the processing required to prepare data for each target data space, including validation, sequencing, mapping, enrichment, and semantic normalisation. Data spaces aggregate clinical, payer, consumer, genomic, and other healthcare data types (such as social, family history, device, and other “omics”) into well-defined data models that complete the patient health record.

Enrich Your Records with Consumer Device Data
Amadeus can ingest, process, and store a broad range of consumer device data types, unlocking powerful new insights into how patients are managing their conditions, improving clinical decision-making at the point of care, and supporting automated patient-monitoring systems that alert providers when the need for intervention arises.

Configure a Data Space Specific for Your Business
Custom data spaces enable bespoke data models to be designed and deployed through configuration. This allows the rapid prototyping of new domains and the capture of customer-specific data sets without the time and cost associated with traditional product development.

Extract Future Value from Data Collected Today
The raw data store is an annotated archive that enables future value to be extracted from data collected today. By retaining all source data in its original form, organisations can focus on their immediate needs, safe in the knowledge that all data is being retained for future analysis and enhanced modeling. This is critical with genomic data, where the understanding of the links between the human genome and our health outcomes is evolving at a rapid pace.

Real-Time Data Streaming
Streaming data from the data engine to the analytics engine in real time, Amadeus converts already aggregated and normalised data into well-structured patient registries that help identify pain points in a population and drive proactive care initiatives.

Integrated Analytics
The intuitive Amadeus Analytics application is an integrated analytics tool that lets users interactively explore data sets, discover meaningful insights, and identify gaps in care. Amadeus’s query builder provides users with a powerful interface for defining patient cohorts and quality measures that provide the basis of clinical quality and care-coordination programs. Patient lists and dashboards allow users to drill down to the comprehensive patient record, allowing for deeper assessment and management of at-risk patients.

Real-Time Risk Stratification
With real-time information—streamed via an architecture that processes and stores “query-ready” data in purpose-built patient registries—at-risk patients can be identified and managed proactively. The seamless integration of Amadeus analytics with Orion Health’s care management applications means clinicians can stratify patients and easily assign them to care coordinators and on to personalised care plans.

Real-Time Actionable Insights
Care gaps and cohorts of patients identified within the Amadeus platform are tightly integrated into the Orion Health care management application—Coordinate and Engage—allowing clinicians, care coordinators, and administrators to close gaps in care with proactive action, such as follow-up calls, appointment scheduling, community-based care plans, and pathway enrollments.
Faster Actions with Improved Speed and Real-Time Insights

Leverage a Superior Patient-Centric Record
Amadeus has a comprehensive approach to acquiring, enriching, analysing, and presenting actionable clinical and claims data. The platform allows third-party developers to access the rich data and services in real time—and leverage a superior patient-centric record—through its API management layer and open, REST-based APIs. Organisations can develop specialty applications through which users can securely interact with authorised records, improving the delivery of care and creating a competitive advantage in new market models.

Interoperability with the HL7® FHIR® (Fast Healthcare Interoperability Resources) Standard
Amadeus supports FHIR APIs, innovative HL7 REST services for accessing discrete information. This approach is rapidly gaining momentum in the healthcare technology industry as the preferred approach to full interoperability.

Security of Access
Open APIs are governed by standards-based OAuth2 security, enabling access from multiple client types such as mobile devices, browser-based clients, and server-based clients for B2B access.

Drive Innovation and Discovery
The Components of Amadeus

The Integration Engine

**Rhapsody Integration Engine**
Designed to offer rapid and reliable integration, Rhapsody is a proven and powerful integration engine that provides a comprehensive set of tools to simplify complex healthcare interoperability.

**Raw Data Store**
The raw data store is a massively scalable message and document archive for storing and indexing all data received from source systems in its raw form.

**Data Processing Pipeline**
The data processing pipeline is a distributed processing engine that provides the bridge between the raw data store and the data spaces. Processing routes retrieve data from the raw data store and process it through a series of configurable validation, mapping, enrichment, and normalization tasks before updating the target data space.

**Clinical Data Spaces**
Clinical data spaces are a rich set of structured data models for processing clinical messages, such as HL7 and C-CDA, and capturing core clinical concepts, such as encounter, diagnosis, procedure, problem, allergy, lab, radiology, and microbiology results. The data models are securely accessible through FHIR-compliant REST APIs.
Data Access

Amadeus Open APIs
We recognize that innovation is not restricted to Orion Health. To foster real change, we need a complete ecosystem of partners and companies to make the best use of the patient-centric record as a whole. Amadeus’ Open APIs enable a completely new ecosystem of opportunities through the development of a rich network of partners that can drive additional value and benefits for users. This value can be derived from working with other parties to leverage the data—including genomic data—in the Amadeus platform.

Payer Data Spaces
Payer data spaces are a range of data models derived from medical claim, pharmacy claim, and membership data. Each of the models is accessible through privacy- and security-enabled REST APIs.

Consumer Data Spaces
Designed around the FHIR Observation resource, consumer data spaces enable the processing and storage of data from consumer devices and apps and unlock the significant potential of remote-patient-monitoring initiatives. The data models are securely accessible through FHIR-compliant REST APIs.

Custom Data Spaces
Custom data spaces provide customers with the ability to deploy custom data models solely through configuration, allowing for rapid prototyping of new domain models and the capturing of customer-specific data sets. In addition to providing the storage infrastructure for these custom models, custom data spaces automatically generate REST APIs that apply the required security, privacy, auditing, patient matching, and enrichment functionality, enabling both Orion Health and third-party applications to consume the captured data.

Business Intelligence interface
Business Intelligence interface allows organizations to maximize their existing investment in analytics by accessing data from the patient registries in Amadeus directly from their data warehouse and analytics platforms. Access can be filtered by configurable rules to ensure that recipients are only provided with the data that they both need and are entitled to access.

Core Services

Patient Matching
The ability to match patient information from numerous—and varied—source systems of data is key to creating a valuable patient-centric record. Amadeus manages this with an advanced master patient index (MPI) to facilitate patient matching, data quality management, and interoperability.

Privacy and Consent
Amadeus includes an advanced privacy implementation that provides granular access to data elements based on the user’s role and the sensitivity of the data. Amadeus’s privacy module provides a unique and simplified user interface that enables advanced privacy rules to be implemented in today’s complex healthcare environments.

Semantic Normalization
The Amadeus precision medicine platform creates a patient-centric record based on data from numerous sources. However, with the inclusion of new data sources from non-clinical settings, we find that our source systems speak different languages and use different dialects and codesets. Our advanced terminology services simplify and normalize the different languages to create an intelligent aggregated record where the information can be analyzed and understood by those who need it.
Clinical Services

Clinical Portal
Amadeus provides an all-encompassing precision medicine platform that can aggregate and manage all types of data. This aggregated health record is immensely valuable to clinicians and caregivers, and is made available via the elegant user interface of the Amadeus’s clinical portal. The web-based clinical portal provides access to the cross-community longitudinal record that presents the providers with the most relevant health information based on all connected sources (e.g., clinical, claims, genomic, behavioral, etc.), all in one place.

Clinical Companion
We empower clinical workforces with a secure, compliant, real-time communications and patient-access tool that allows the management of patients, tasks, and communications anywhere. Available as an option on top of Orion Health Amadeus, Clinical Companion is a mobile app that works in concert with Orion Health Coordinate and Orion Health Engage.

Clinical Notifications
With patients visiting multiple healthcare organizations throughout their community, it is important to keep relevant parties informed about a patient’s ongoing care and treatment. Notification and subscription management is a clinical feature of Amadeus that enables real-time messaging of critical information, ensuring that providers know about patient events outside their organization. The notification tool distributes relevant alerts and clinical information about predefined events, such as a hospital admission, a discharge, or the availability of finalized laboratory results for review.

EMR Connect
Amadeus often holds important clinical information not available to a user’s traditional EMR system. EMR Connect brings this important information to the attention of the clinical user with the use of a lightweight desktop component. This component integrates with the EMR system to detect when a patient record is viewed. It then displays relevant information from the Amadeus platform - without requiring the clinical user to leave their EMR system - thus saving time and increasing patient safety.
Future-proof your journey from Interoperability to Population Health and Precision Medicine.
Every step you take toward delivering personalized healthcare is valuable.
Our end-to-end solution—built on our Amadeus platform with real-time-analytics, clinical, patient-engagement, and enterprise applications—will future-proof your journey.

Find out more at orionhealth.com/global/products/amadeus