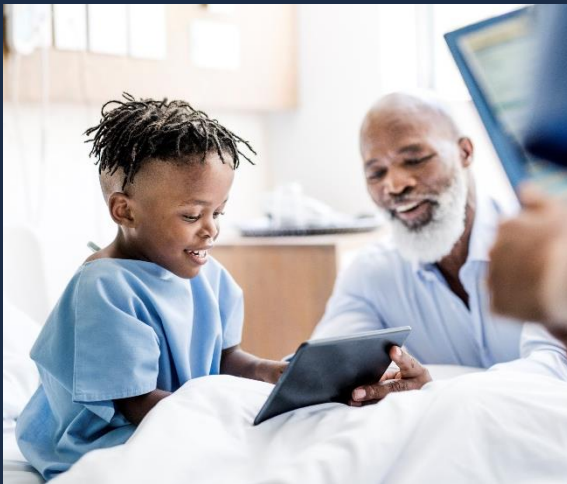Microsoft

Module 3
# Healthcare Data Model

# Healthcare + Common Data Model

- What is the Microsoft Common Data Model (CDM)
- Microsoft Cloud for Healthcare solution layering
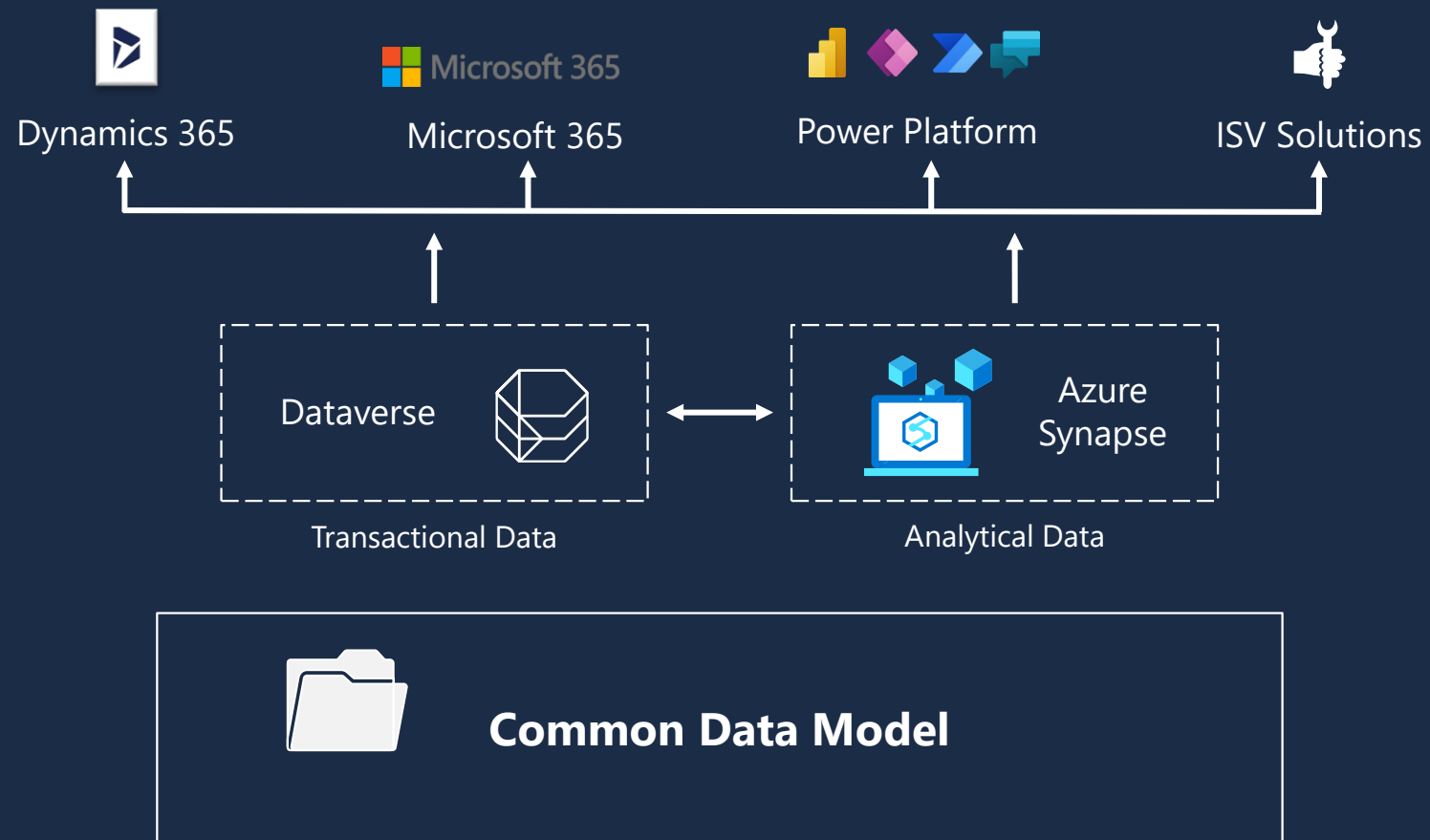- Healthcare Data Model extensibility
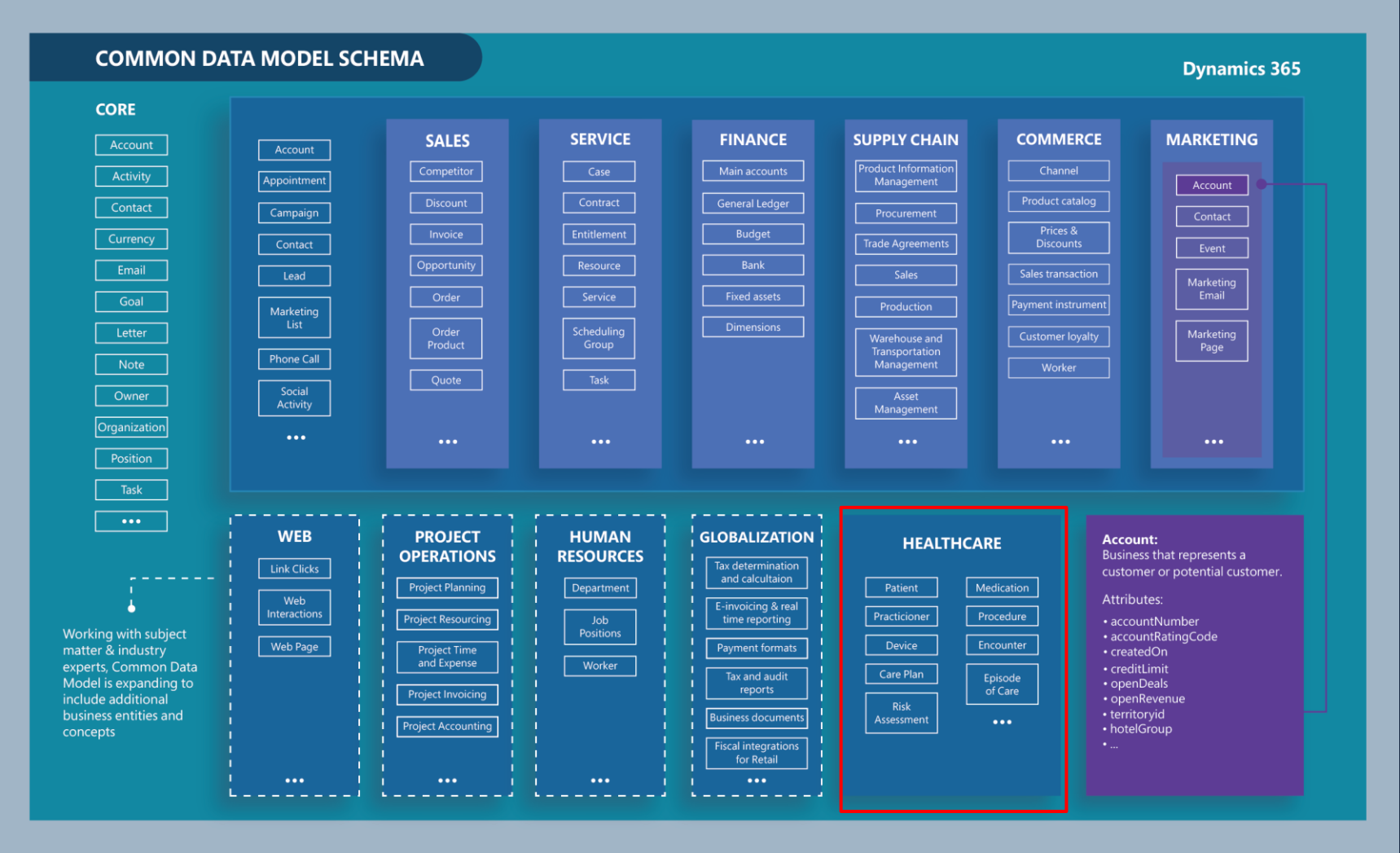
# Microsoft Common Data Model

A common machine-understandable way to **describe data** with **semantic consistency** across business, transactional, analytical and industry domains that **drives interoperability** across apps and services from the Microsoft ecosystem, and customers to **create insights**
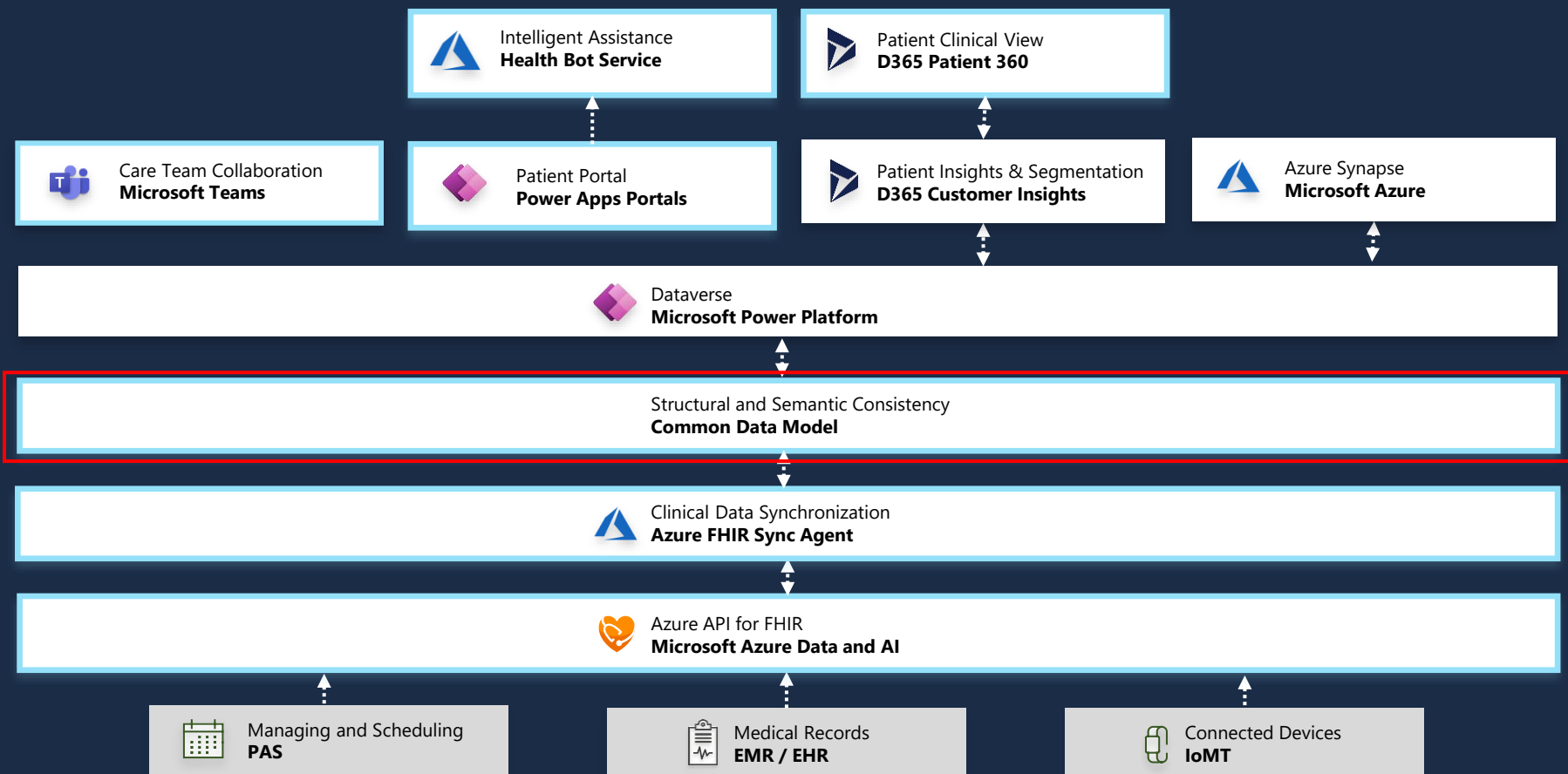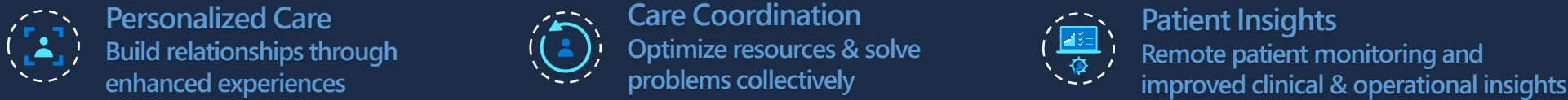
# Common Data Model Schema

# Common Data Model in Healthcare Cloud

**Personalized Care**
Build relationships through enhanced experiences

**Care Coordination**
Optimize resources & solve problems collectively

**Patient Insights**
Remote patient monitoring and improved clinical & operational insights

Intelligent Assistance
**Health Bot Service**

Patient Clinical View
**D365 Patient 360**

Care Team Collaboration
**Microsoft Teams**

Patient Portal
**Power Apps Portals**

Patient Insights & Segmentation
**D365 Customer Insights**

Azure Synapse
**Microsoft Azure**

Dataverse
**Microsoft Power Platform**

Structural and Semantic Consistency
**Common Data Model**

Clinical Data Synchronization
**Azure FHIR Sync Agent**

Azure API for FHIR
**Microsoft Azure Data and AI**

Managing and Scheduling
**PAS**

Medical Records
**EMR / EHR**

Connected Devices
**IoMT**

**Key**

Microsoft Cloud for Healthcare

Microsoft Product

Other

# Solution Layering in Microsoft Cloud for Healthcare

★ Microsoft Cloud for Healthcare Capability Package **+** Microsoft Cloud for Healthcare Sample Data Package ▲

★ | Configuration Data | FHIR Sync Administration Package | Solution/s |

★ | Microsoft Cloud for Healthcare Team Collaboration Package | Solution/s |

★ | Configuration Data | Microsoft Cloud for Healthcare Foundation Package | Solution/s |

★ Required   ▲ Optional
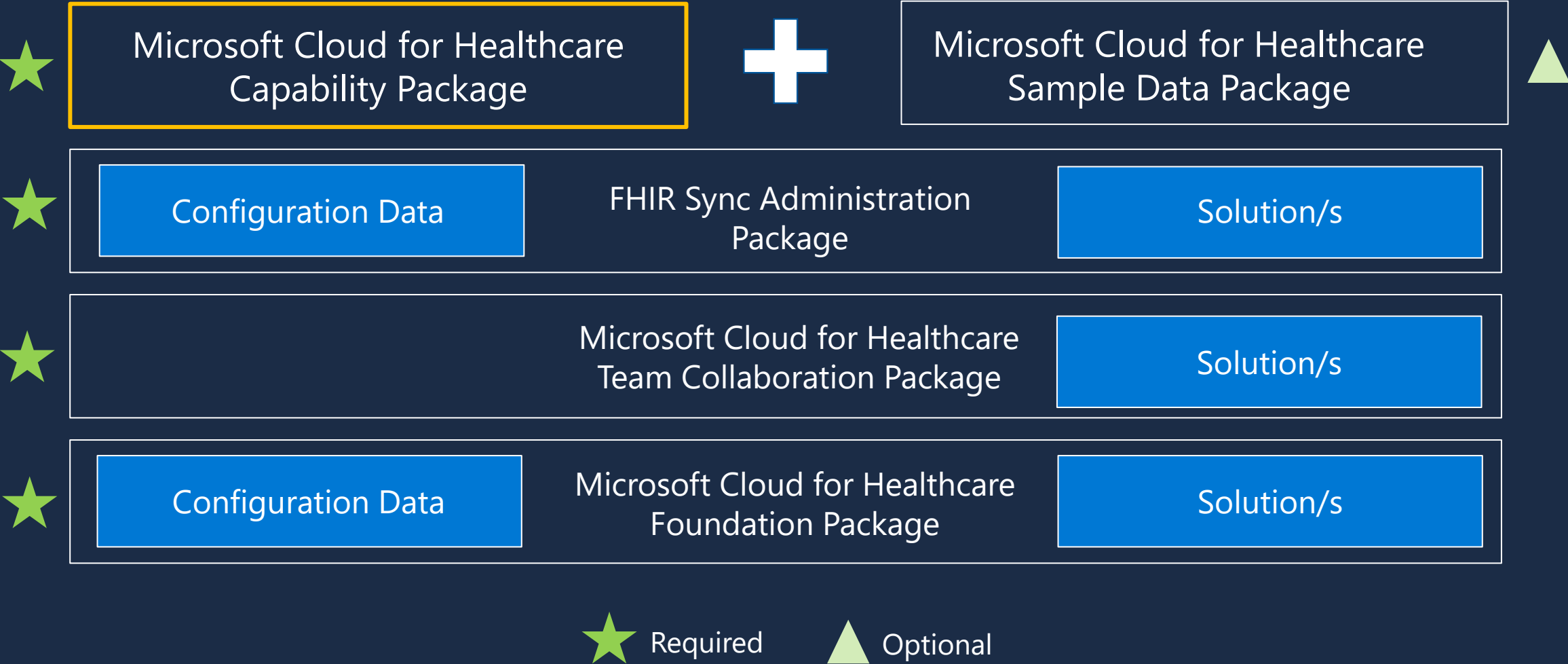
# Healthcare Data Model
## Care Management

| Table | Schema/Logical Name |
|---|---|
| Allergy Intolerance | msemr_allergyintolerance |
| Appointment (EMR) | msemr_appointmentemr |
| Appointment Indication (EMR) | msemr_appointmentemrindication |
| Appointment Participant (EMR) | msemr_appointmentemrparticipant |
| Appointment Reason (EMR) | msemr_appointmentemrreason |
| Appointment Referral Request (EMR) | msemr_appointmentemrreferralrequest |
| Care Plan | msemr_careplan |
| Care Plan Activity | msemr_careplanactivity |
| Care Plan Activity Goal | msemr_careplanactivitygoal |
| Care Plan Activity Performer | msemr_careplanactivityperformer |
| Care Plan Care Team | msemr_careplancareteam |
| Care Plan Goal | msemr_careplangoal |
| Care Plan Goal Outcome | msemr_careplangoaloutcome |
| Care Plan Part Of | msemr_careplanpartof |
| Care Team | msemr_careteam |
| Care Team Managing Organization | msemr_careteammanagingorganization |
| Care Team Participant | msemr_careteamparticipant |
| Claim | msemr_Claim |
| Condition | msemr_condition |
| Contact (Patient, Related Person, Practitioner) | Contact |
| Coverage | msemr_Coverage |
| Device | msemr_device |
| Encounter | msemr_encounter |
| Encounter Diagnosis | msemr_encounterdiagnosis |
| Encounter Episode of Care | msemr_encounterepisodeofcare |
| Encounter Location | msemr_encounterlocation |
| Encounter Participant | msemr_encounterparticipant |
| Encounter Reason | msemr_encounterreason |
| Episode of Care | msemr_episodeofcare |

| Table | Schema/Logical Name |
|---|---|
| Goal | msemr_goal |
| Health Care Service | msemr_healthcareservice |
| Health Care Service Location | msemr_healthcareservicelocation |
| Insurer | Account |
| Location | msemr_location |
| Medication | Product |
| Medication Administration | msemr_medicationadministration |
| Medication Price List | PriceLevel |
| Medication Request | msemr_medicationrequest |
| Nutrition Order | msemr_nutritionorder |
| Observation | msemr_observation |
| Observation Based On | msemr_observationbasedon |
| Observation Category | msemr_observationcategory |
| Observation Performer | msemr_observationperformer |
| Organization | Account |
| Patient | Contact |
| Practitioner | Contact |
| Practitioner Qualifications | msemr_practitionerqualification |
| Practitioner Role | msemr_practitionerrole |
| Price List Items | ProductPriceLevel |
| Procedure | msemr_procedure |
| Procedure Based On | msemr_procedurebasedon |
| Procedure Body Site | msemr_procedurebodysite |
| Procedure Performer | msemr_procedureperformer |
| Referral Request | msemr_referralrequest |
| Related Person | Contact |
| Related Person Link | msemr_relatedperson |
| Risk Assessment | msemr_riskassessment |
| Specimen | msemr_specimen |
| Task | Task |
| Unit Group | UoMSchedule |

*This slide demonstrates the CDM for Healthcare based on sample data. This is not a full representation

# Healthcare Data Model
## Patient Outreach

| Table | Schema / Logical Name |
|---|---|
| All Tables from Care Management / Foundational Data | |
| Appointment | appointment |
| Phone Call | phonecall |
| Marketing List | list |
| Customer Journey | msdyncrm_custom |
| Marketing Email | msdyncrm_market |
| Event | msevtmgt_event |
| Event Registration | msevtmgt_eventr |
| Lead | lead |
| Segment | msdyncrm_segment |

*The slide demonstrates the CDM for Healthcare based on sample data, and not a full representation

# Healthcare Data Model
## Home Health

| Table | Schema / Logical Name |
|---|---|
| All Tables from Care Management / Foundational Data | |
| Incident Type | msdyn_incidenttype |
| Case | incident |
| Home Care | msdyn_workorder |
| Price List | pricelevel |

*The slide demonstrates the CDM for Healthcare based on sample data, and not a full representation
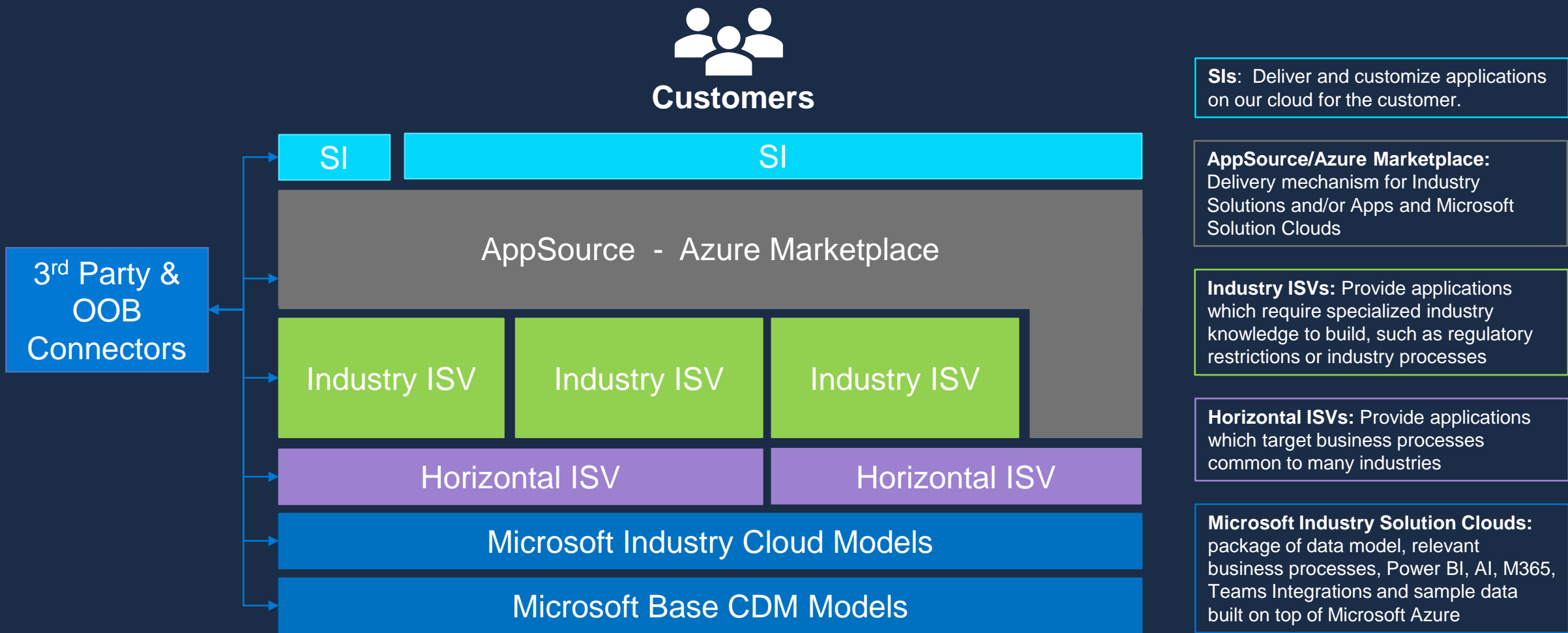
**Healthcare
Data Model
Extensibility**

# CDM Extensibility – Solution Delivery Model



**Customers**

SI

SI

3rd Party & OOB Connectors

AppSource - Azure Marketplace

Industry ISV

Industry ISV

Industry ISV

Horizontal ISV

Horizontal ISV

Microsoft Industry Cloud Models

Microsoft Base CDM Models

**SIs**: Deliver and customize applications on our cloud for the customer.

**AppSource/Azure Marketplace:** Delivery mechanism for Industry Solutions and/or Apps and Microsoft Solution Clouds

**Industry ISVs:** Provide applications which require specialized industry knowledge to build, such as regulatory restrictions or industry processes

**Horizontal ISVs:** Provide applications which target business processes common to many industries

**Microsoft Industry Solution Clouds:** package of data model, relevant business processes, Power BI, AI, M365, Teams Integrations and sample data built on top of Microsoft Azure

*Disclaimer: Neither Microsoft Cloud for Healthcare nor any of its component technologies is intended or made available as a medical device for the diagnosis of disease or other conditions, or in the cure, mitigation, treatment or prevention of a disease. Partners are responsible for ensuring the regulatory compliance of any solution they build using Microsoft Cloud for Healthcare