Jan 25, 2022

MDM Federated Architecture Options

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Housekeeping Tips

- Today's Webinar is scheduled for 1 hour
- The session will include a webcast and then your questions will be answered live at the end of the presentation
- All dial-in participants will be muted to enable the speakers to present without interruption
- Questions can be submitted to "All Panelists" via the Q&A option and we will respond at the end of the presentation
- The webinar is being recorded and will be available on our INFASupport YouTube channel and Success Portal - where you can download the slide deck for the presentation. The link to the recording will be emailed as well.
- Please take time to complete the post-webinar survey and provide your feedback and suggestions for upcoming topics.

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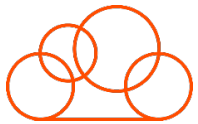

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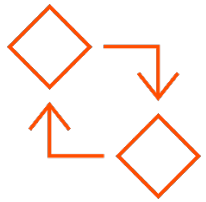

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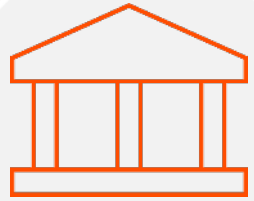

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Jan 25, 2022

Best Practices for Distribution of MDM

Dilip Yeluguri & Sourya Dass

Agenda

- Mastering across countries and/or business units
- Distribution and Federation of MDM Hubs

Part 1: Considerations for mastering across business units and national borders

Federated Hub Considerations

- Determine how data is to be consolidated.
  - Domains are completely independent – no “clubbing” of domain data. (e.g. clubbing suppliers and employees as parties)
- Address Compliance/Security/Physical Access concerns
  - Data Residency
  - GDPR/CCPA
  - German Employment Council
- Think about Hub management (Central or Local)
  - If data will be segmented geographically, governance of that data must also be segmented
- Identify Synchronization and correlation requirements
  - If data will be segmented geographically, coherence and correlation requirements must be addressed
- Design for non-invasive use of data from Existing Hubs
- Design to make adding additional domains easy

Federated Hub Considerations (continued)

- Determine the need/desire for a Common Core Data Model
  - Determine if regions need different attributes to support the same domain
- Identify Internationalization requirements
  - BU-Specific or Country-specific data model extensions
  - Lookup tables
  - Language/matching rules
  - System interfaces
  - External sources
- Determine if additional use cases will need to be supported

Hub Synchronization Considerations

- Frequency and timing of Central to Local Hub synchronization
- Queuing of Local updated and new records for Central Stewards approval/conflict resolution
- Provide Local visibility to history, lineage of Central Hub
- Provide tools that help build/design Local Hubs from Central

Policy/Governance Considerations

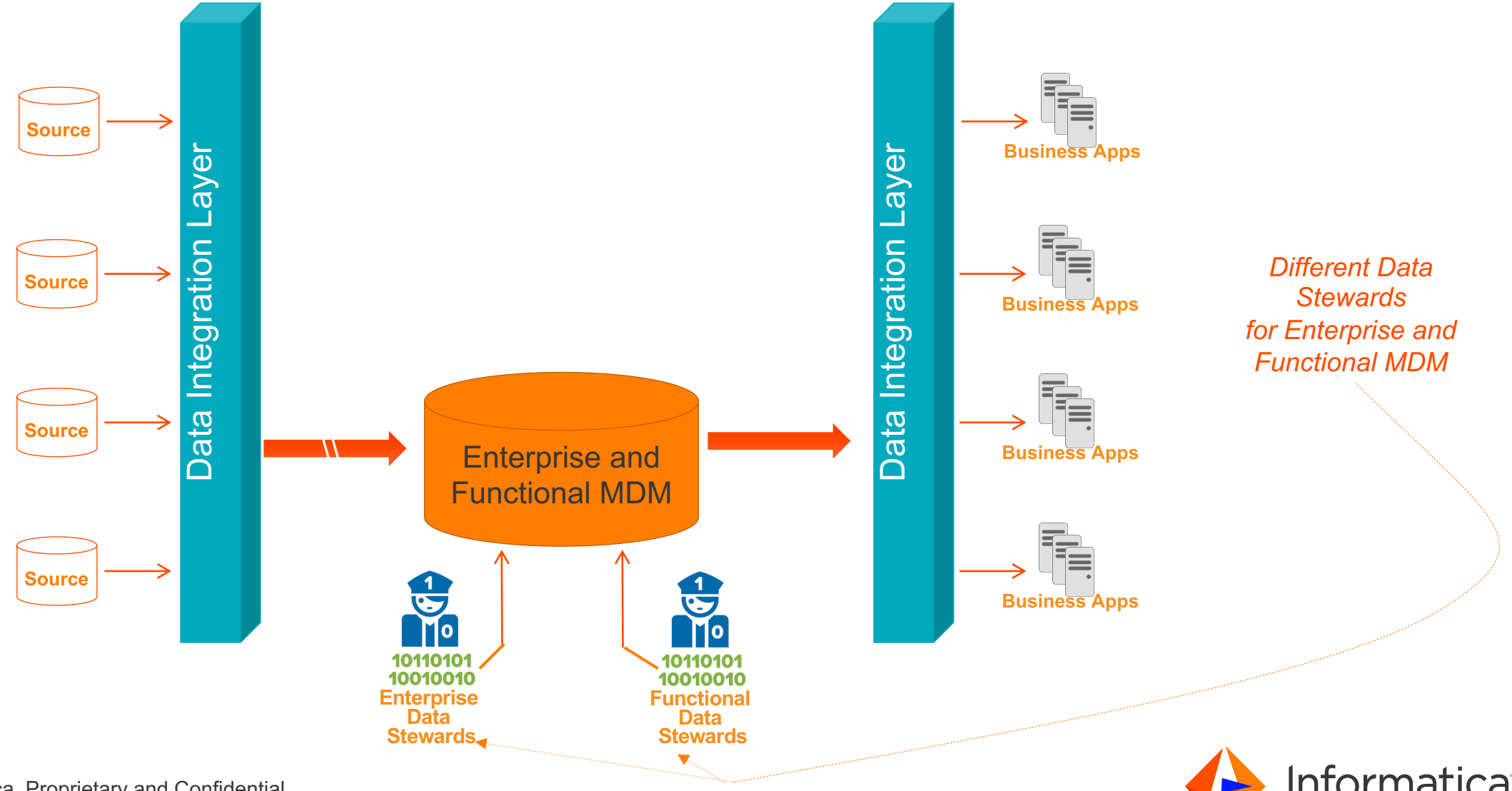
- Definition of Common Sources and Shared Core Customer Attributes
- Definition and Management of Reference Data
- Definition of Process for Sharing & Synchronization
- Data Governance Roles and Needs
- Establishing of Trust Framework
- Definition of Process for Local Master Data Management
- Workflow Requirements

Part 2: Federated Architectural Options

MDM Reference Architecture

Approaches 1 & 2

Option 1a: Singe ORS, Single Data Model
Option 1b: Single ORS, Multiple Data Models
Option 2a: Multiple ORS, Single Data Model
Option 2b: Multiple ORS, Multiple Data Models



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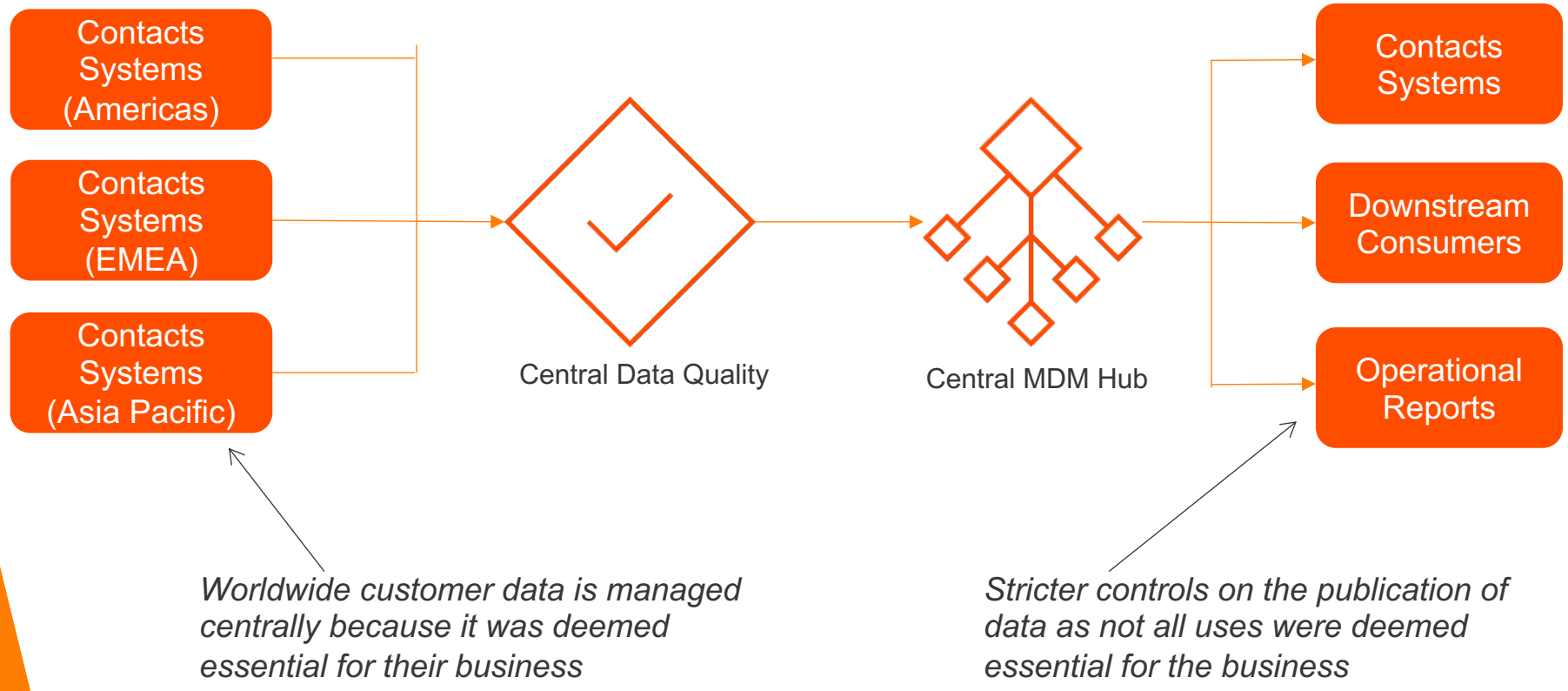
Example: Large International Logistics Company



- Single domain
- Single Instance of MDM/DQ
- Very Large Infrastructure
- All data available is in English
- No locale specific mastering

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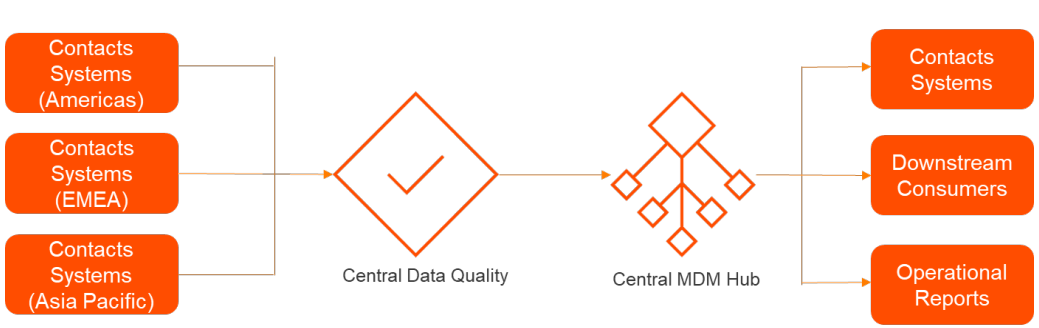
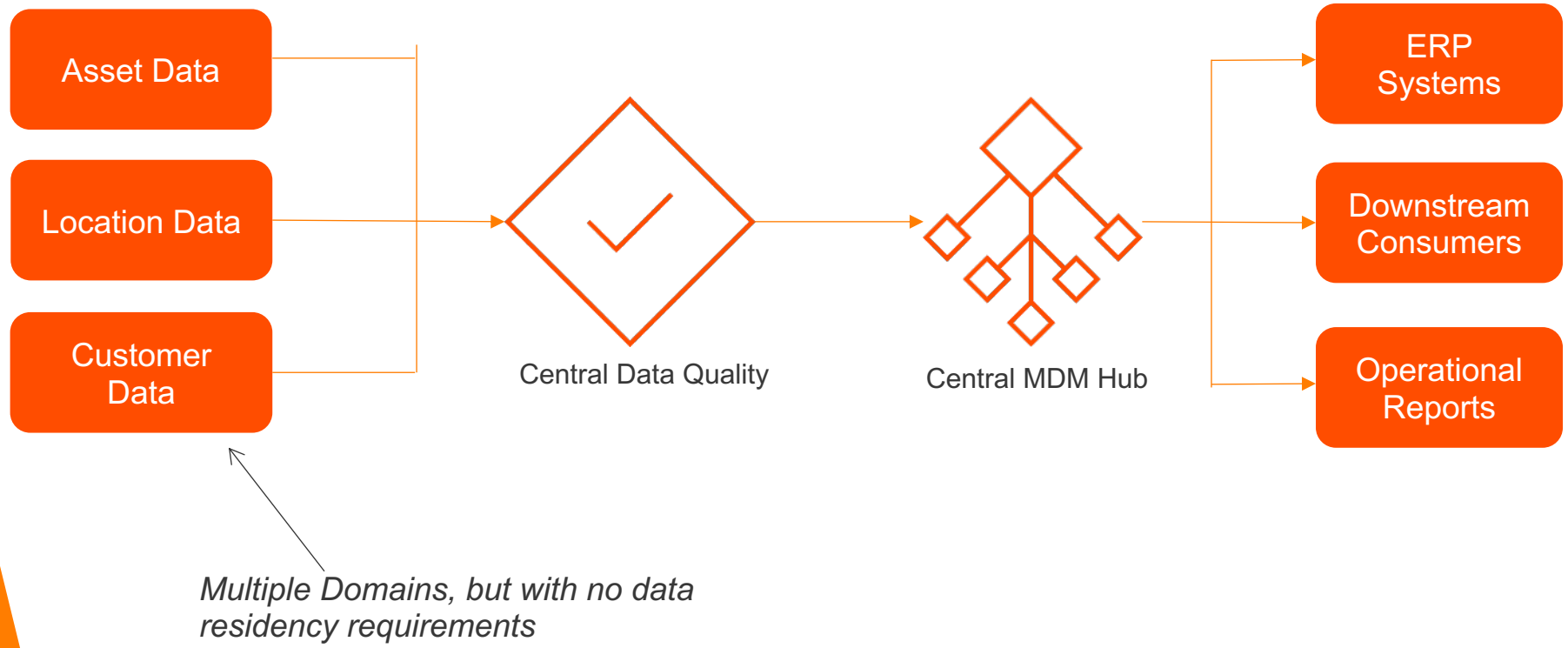
Distributed Hub Options [Summary]

- Approach 1: Single Hub Instance with Single Repository
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository



REQUIREMENT	APPROACH	
	1a	1b
Common Data Model (core attributes)	√	√
Locale specific configuration for access control	√	√
Privacy laws governing use of data	√	√
Common Data Model (all attributes)	√	√
Relationships across all entities	√	
Relationships across a subset of entities		√
Locale specific data model extensions		
Locale specific lookup tables		
Locale specific workflow		
Regional level data management		
Privacy laws governing protection of data		
Locale specific configuration for permissions		
Country level data management		
Privacy laws governing physical location of data		
Stay active in a region and inactive in another		
Locale specific configuration for user properties		
Link data from existing heterogeneous hubs		
Consolidate from existing heterogeneous hubs		
Master Data Closest to Source		

Example: Large International Energy Company



- Multiple domains
- Single Instance of MDM/DQ
- Multipe Data Models
- Multilingual
- Domain specific mastering
- Locale specific mastering

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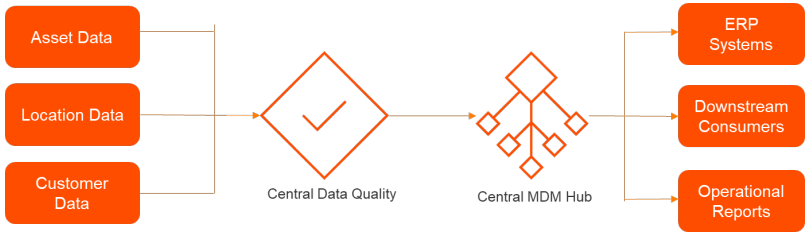
Distributed Hub Options [Summary]

- Approach 2: Single Hub Instance with Multiple Repositories
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository

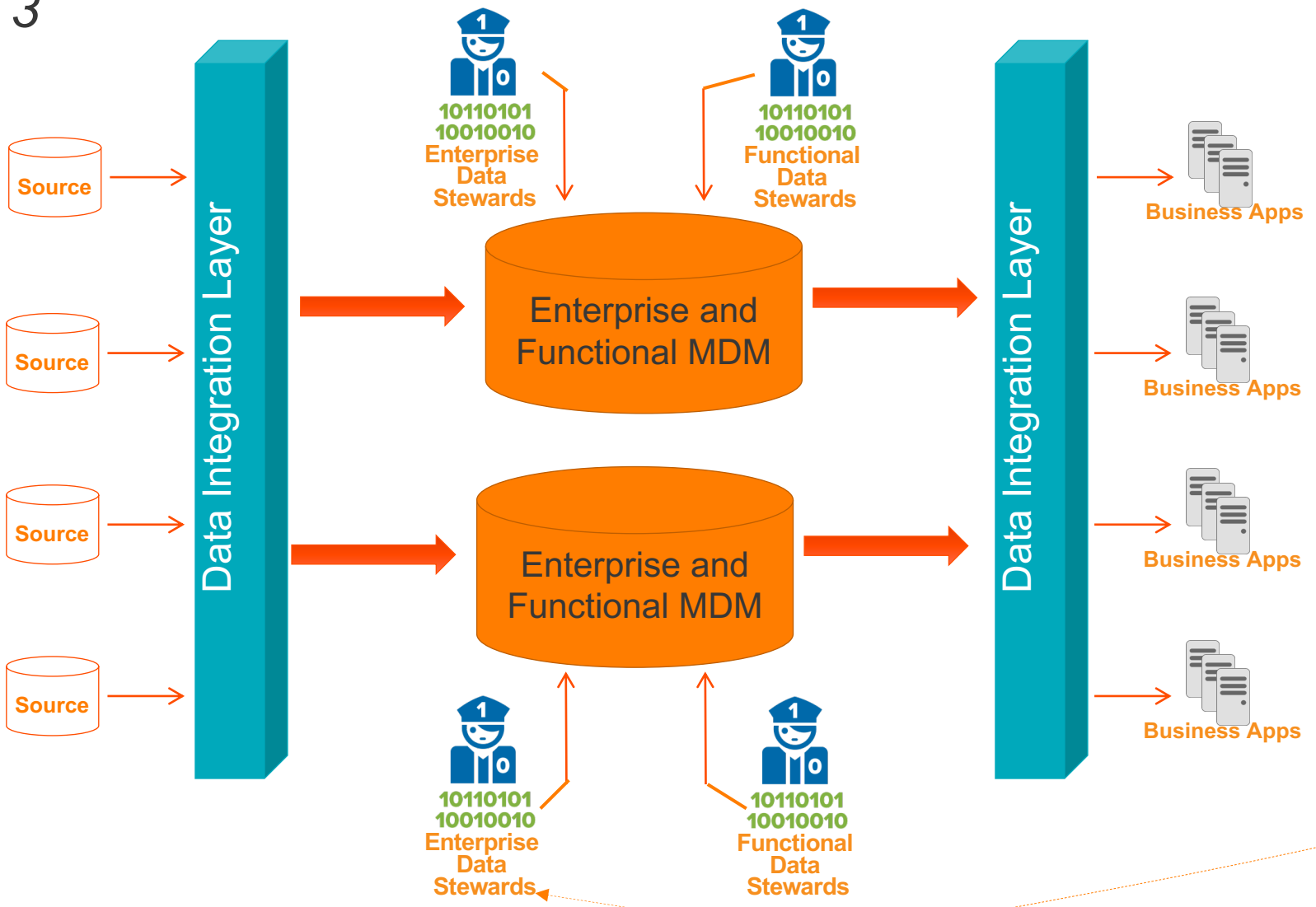


REQUIREMENT	APPROACH			
	1a	1b	2a	2b
Common Data Model (core attributes)	√	√	√	√
Locale specific configuration for access control	√	√	√	√
Privacy laws governing use of data	√	√	√	√
Common Data Model (all attributes)	√	√	√	√
Relationships across all entities	√		√	
Relationships across a subset of entities		√		√
Locale specific data model extensions			√	√
Locale specific lookup tables			√	√
Locale specific workflow			√	√
Regional level data management			√	√
Privacy laws governing protection of data			√	√
Locale specific configuration for permissions			√	√
Country level data management				
Privacy laws governing physical location of data				
Stay active in a region and inactive in another				
Locale specific configuration for user properties				
Link data from existing heterogeneous hubs				
Consolidate from existing heterogeneous hubs				
Master Data Closest to Source				

MDM Reference Architecture

Approach 3

Option 3a: Single Data Model
Option 3b: Multiple Data Models



Different Data Stewards for Enterprise and Functional MDM

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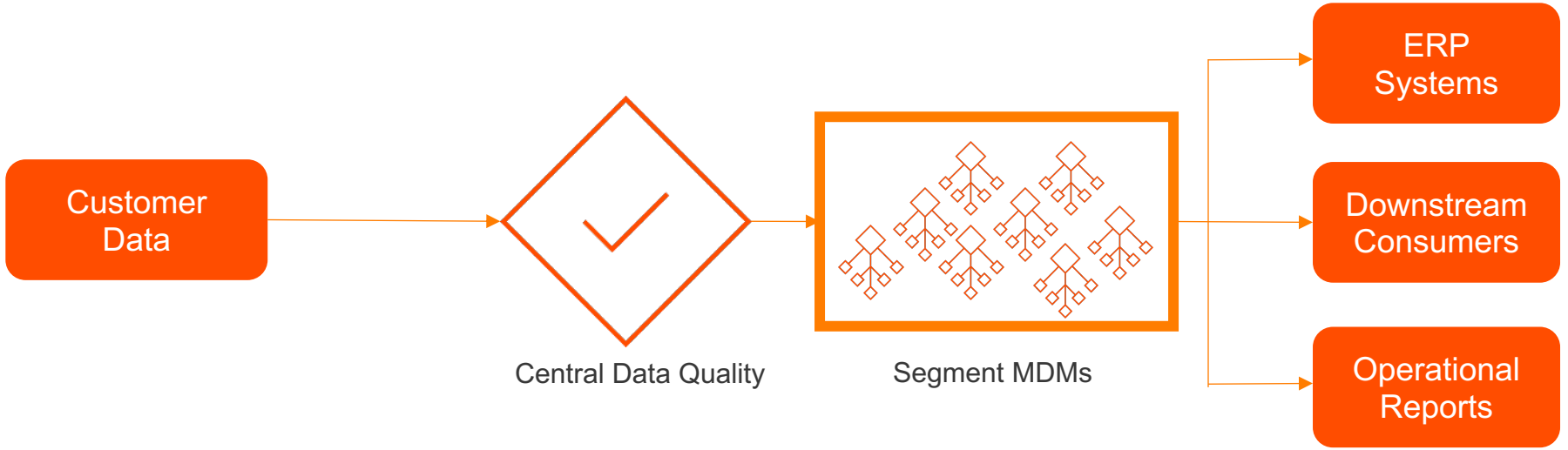
Example: Large European Bank



- Single Domain
- Single Instance of DQ
- Multiple Instances of MDM
- Multiple Data Models
- Multilingual

Distributed Hub Options [Summary]

- Approach 3: Multiple Hub Instances with Single Repository per Instance
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository

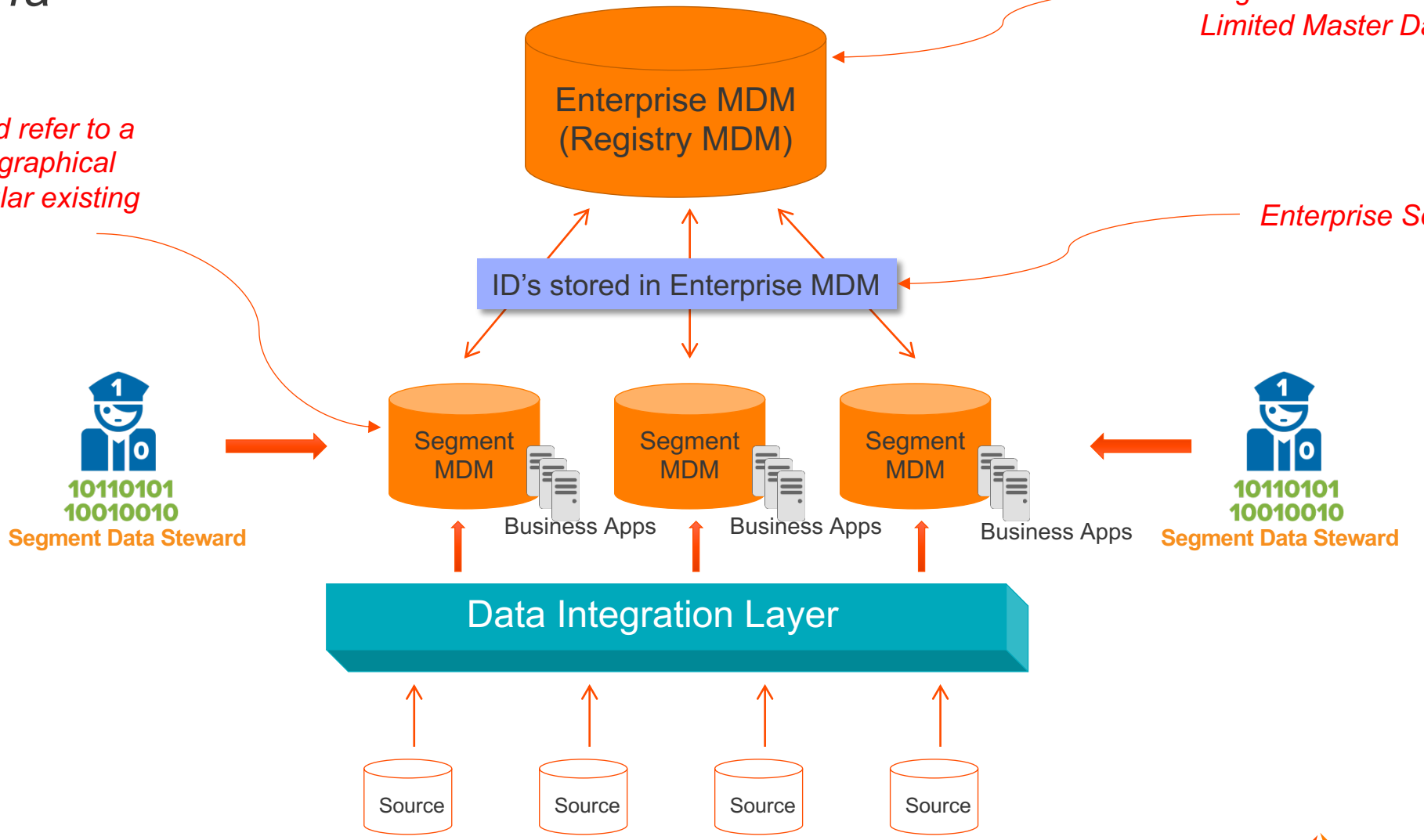
REQUIREMENT	APPROACH					
	1a	1b	2a	2b	3a	3b
Common Data Model (core attributes)	√	√	√	√	√	√
Locale specific configuration for access control	√	√	√	√	√	√
Privacy laws governing use of data	√	√	√	√	√	√
Common Data Model (all attributes)	√	√	√	√	√	√
Relationships across all entities	√		√		√	
Relationships across a subset of entities		√		√		√
Locale specific data model extensions			√	√	√	√
Locale specific lookup tables			√	√	√	√
Locale specific workflow			√	√	√	√
Regional level data management			√	√	√	√
Privacy laws governing protection of data			√	√	√	√
Locale specific configuration for permissions			√	√	√	√
Country level data management					√	√
Privacy laws governing physical location of data					√	√
Stay active in a region and inactive in another					√	√
Locale specific configuration for user properties					√	√
Link data from existing heterogeneous hubs						
Consolidate from existing heterogeneous hubs						
Master Data Closest to Source						

MDM Reference Architecture
Approach 4a

Enterprise view of master data by storing ID's from the Segment MDM Hubs along with Limited Master Data Elements

Segment MDM could refer to a business unit, a geographical location, or a particular existing MDM solution

Enterprise Services Bus



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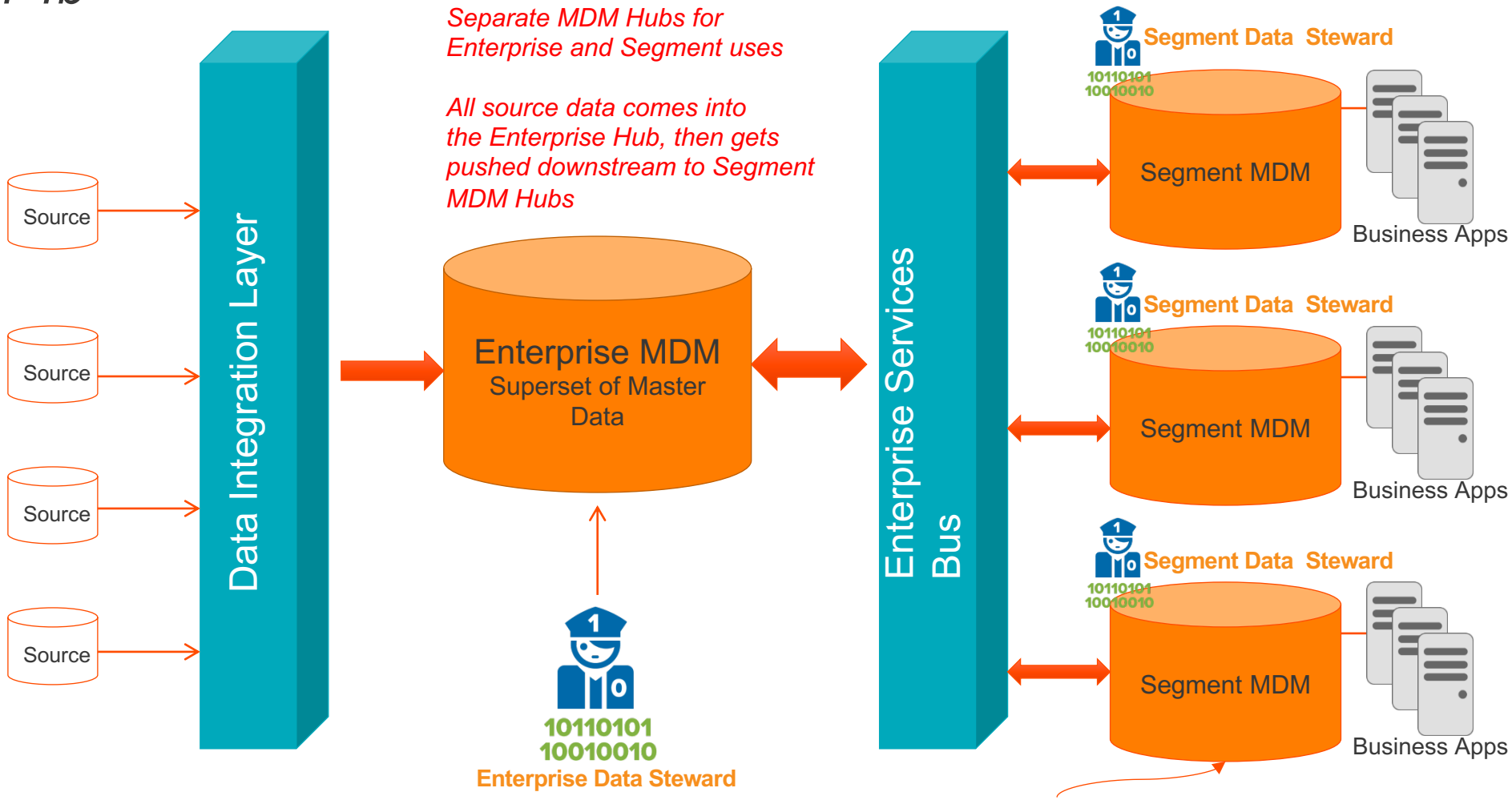
MDM Reference Architecture

Approach 4b



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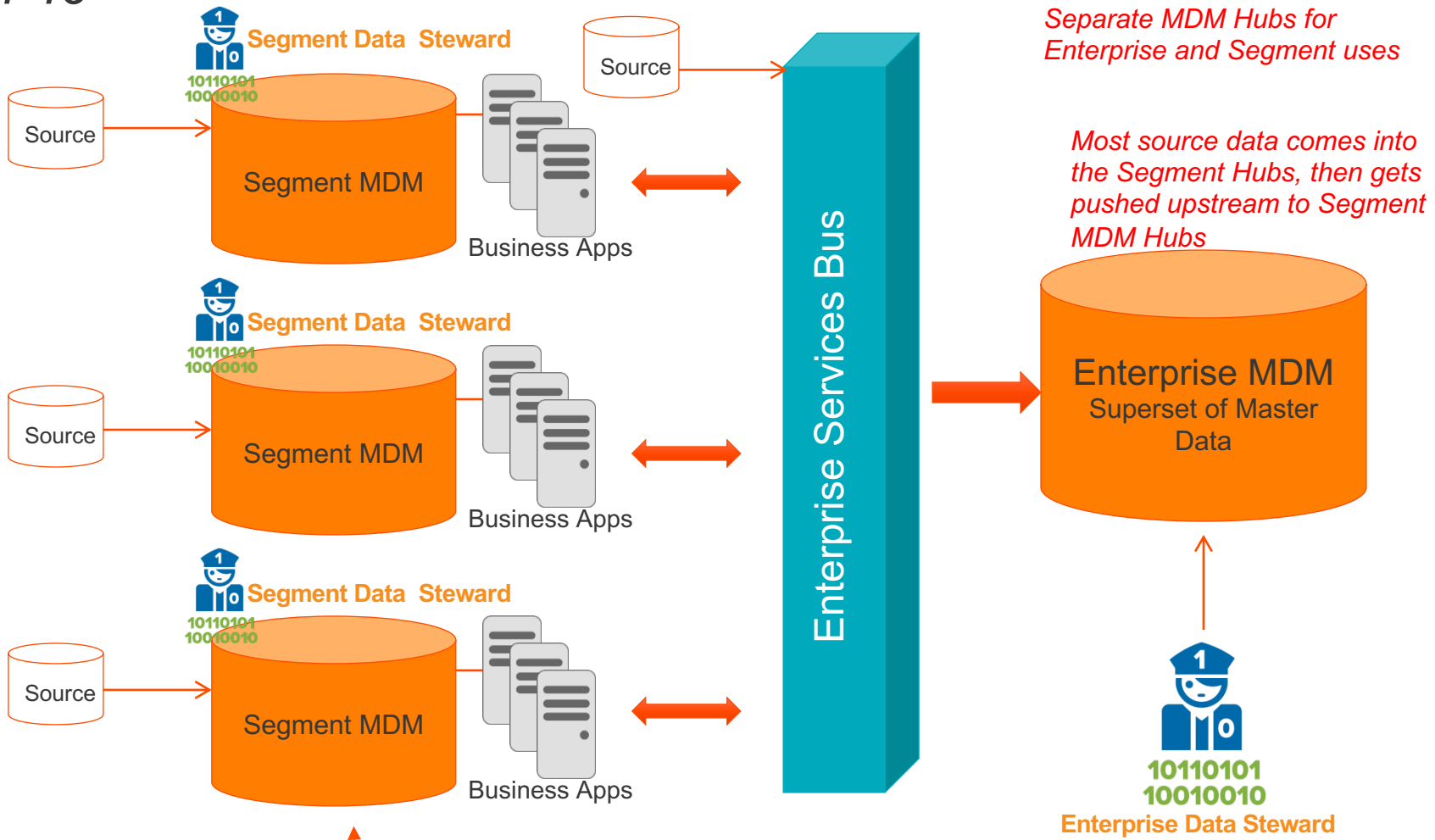
MDM Reference Architecture
Approach 4c

Source data can come directly into the Enterprise Hubs, if appropriate.



Separate MDM Hubs for Enterprise and Segment uses

Most source data comes into the Segment Hubs, then gets pushed upstream to Segment MDM Hubs

Enterprise MDM
Superset of Master Data

10110101
10010010
Enterprise Data Steward

Segment MDM could refer to a business unit, a geographical location, or a particular existing MDM solution

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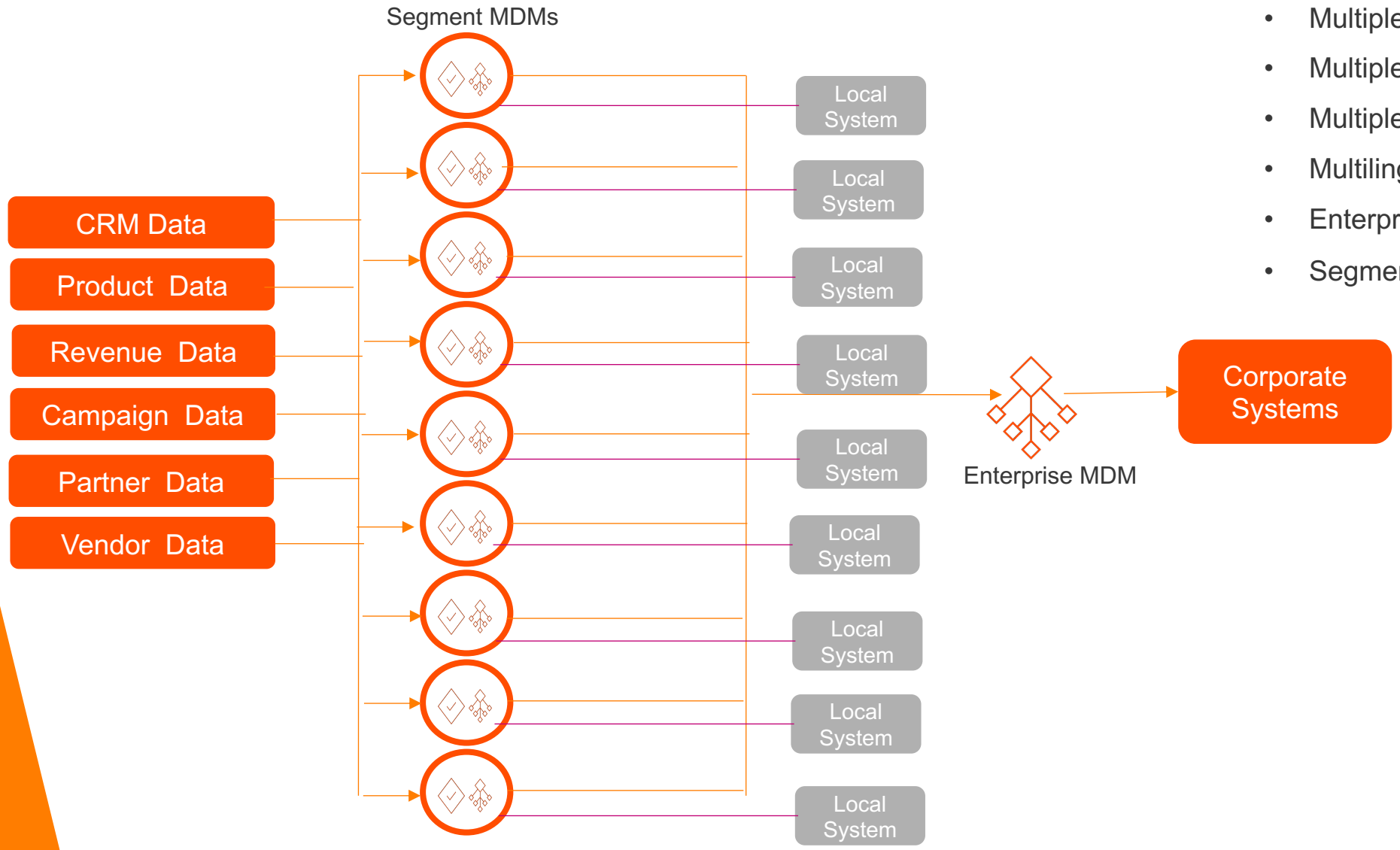
Example: Large Publisher/Retailer



- Multiple Domains
- Multiple Instances of MDM/DQ
- Multiple Data Models
- Multilingual
- Enterprise Hub for Corporate
- Segment Hubs for LOBs

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Distributed Hub Options [Summary]

- Approach 4: Hub of Hubs
  - Option A: Registry of Hubs
  - Option B: Subset Master Hub
  - Option C: Hub and Spoke

REQUIREMENT	APPROACH								
	1a	1b	2a	2b	3a	3b	4a	4b	4c
Common Data Model (core attributes)	√	√	√	√	√	√	√	√	√
Locale specific configuration for access control	√	√	√	√	√	√	√	√	√
Privacy laws governing use of data	√	√	√	√	√	√	√	√	√
Common Data Model (all attributes)	√	√	√	√	√	√			
Relationships across all entities	√		√		√				
Relationships across a subset of entities		√		√		√			
Locale specific data model extensions			√	√	√	√	√	√	√
Locale specific lookup tables			√	√	√	√	√	√	√
Locale specific workflow			√	√	√	√	√	√	√
Regional level data management			√	√	√	√	√	√	√
Privacy laws governing protection of data			√	√	√	√	√	√	√
Locale specific configuration for permissions			√	√	√	√	√	√	√
Country level data management					√	√	√	√	√
Privacy laws governing physical location of data					√	√	√	√	√
Stay active in a region and inactive in another					√	√	√	√	√
Locale specific configuration for user properties					√	√	√	√	√
Link data from existing heterogeneous hubs							√		
Consolidate from existing heterogeneous hubs								√	√
Master Data Closest to Source							√		√

Distributed Hub Options [Summary]

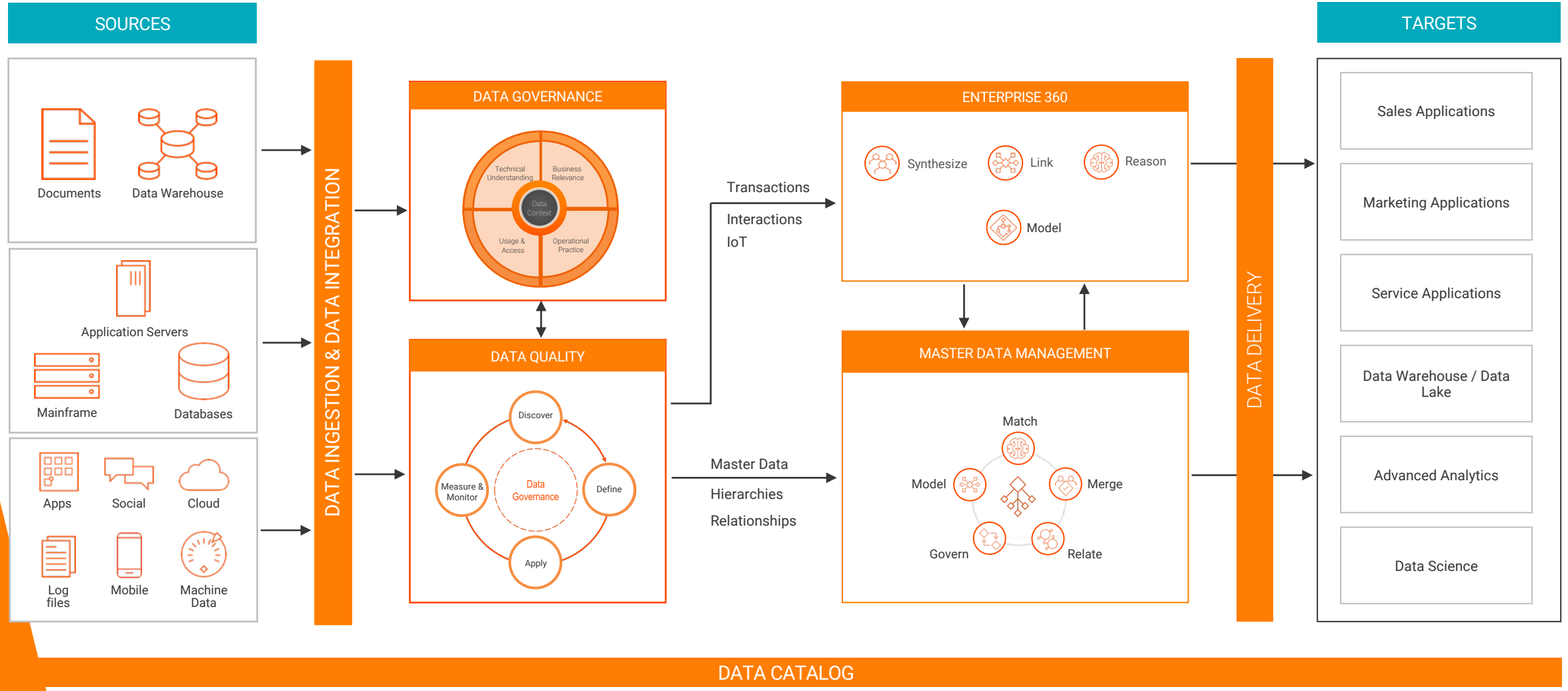
- Approach 1: Single Hub Instance with Single Repository
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository
- Approach 2: Single Hub Instance with Multiple Repositories
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository
- Approach 3: Multiple Hub Instances with Single Repository per Instance
  - Option A: Single Data Model per Repository
  - Option B: Multiple Data Models per Repository
- Approach 4: Hub of Hubs
  - Option A: Registry of Hubs
  - Option B: Subset Master Hub
  - Option C: Hub and Spoke

Making the Decision

REQUIREMENT	APPROACH								
	1a	1b	2a	2b	3a	3b	4a	4b	4c
Common Data Model (core attributes)	√	√	√	√	√	√	√	√	√
Locale specific configuration for access control	√	√	√	√	√	√	√	√	√
Privacy laws governing use of data	√	√	√	√	√	√	√	√	√
Common Data Model (all attributes)	√	√	√	√	√	√			
Relationships across all entities	√		√		√				
Relationships across a subset of entities		√		√		√			
Locale specific data model extensions			√	√	√	√	√	√	√
Locale specific lookup tables			√	√	√	√	√	√	√
Locale specific workflow			√	√	√	√	√	√	√
Regional level data management			√	√	√	√	√	√	√
Privacy laws governing protection of data			√	√	√	√	√	√	√
Locale specific configuration for permissions			√	√	√	√	√	√	√
Country level data management					√	√	√	√	√
Privacy laws governing physical location of data					√	√	√	√	√
Stay active in a region and inactive in another					√	√	√	√	√
Locale specific configuration for user properties					√	√	√	√	√
Link data from existing heterogeneous hubs							√		
Consolidate from existing heterogeneous hubs								√	√
Master Data Closest to Source							√		√

What’s Next?

Business360 / Governance Deployment Architecture



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