

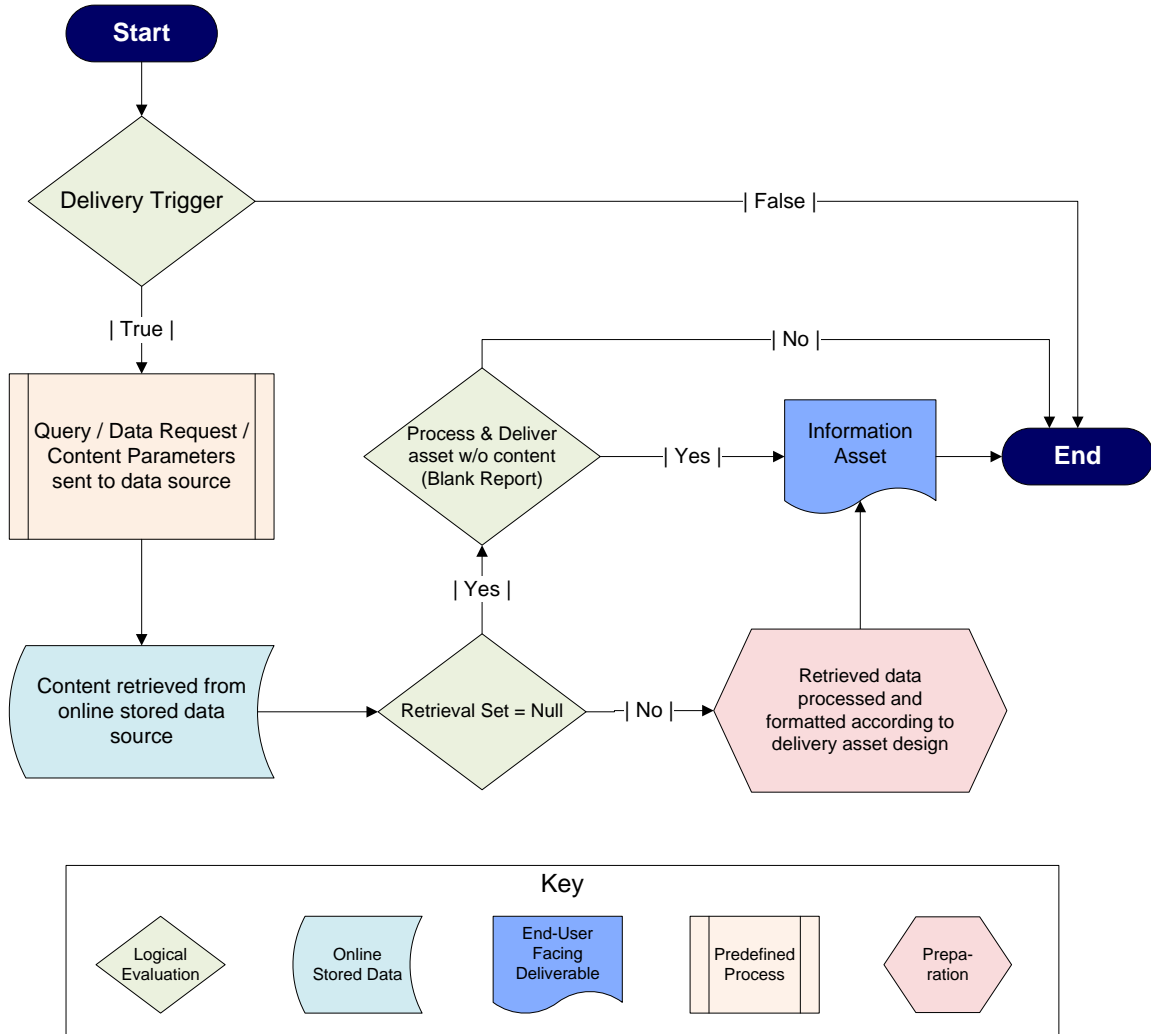
Delivery Models

Delivery models refer to the method by which Information and Business Intelligence is sent from its source to its destination (consumer).

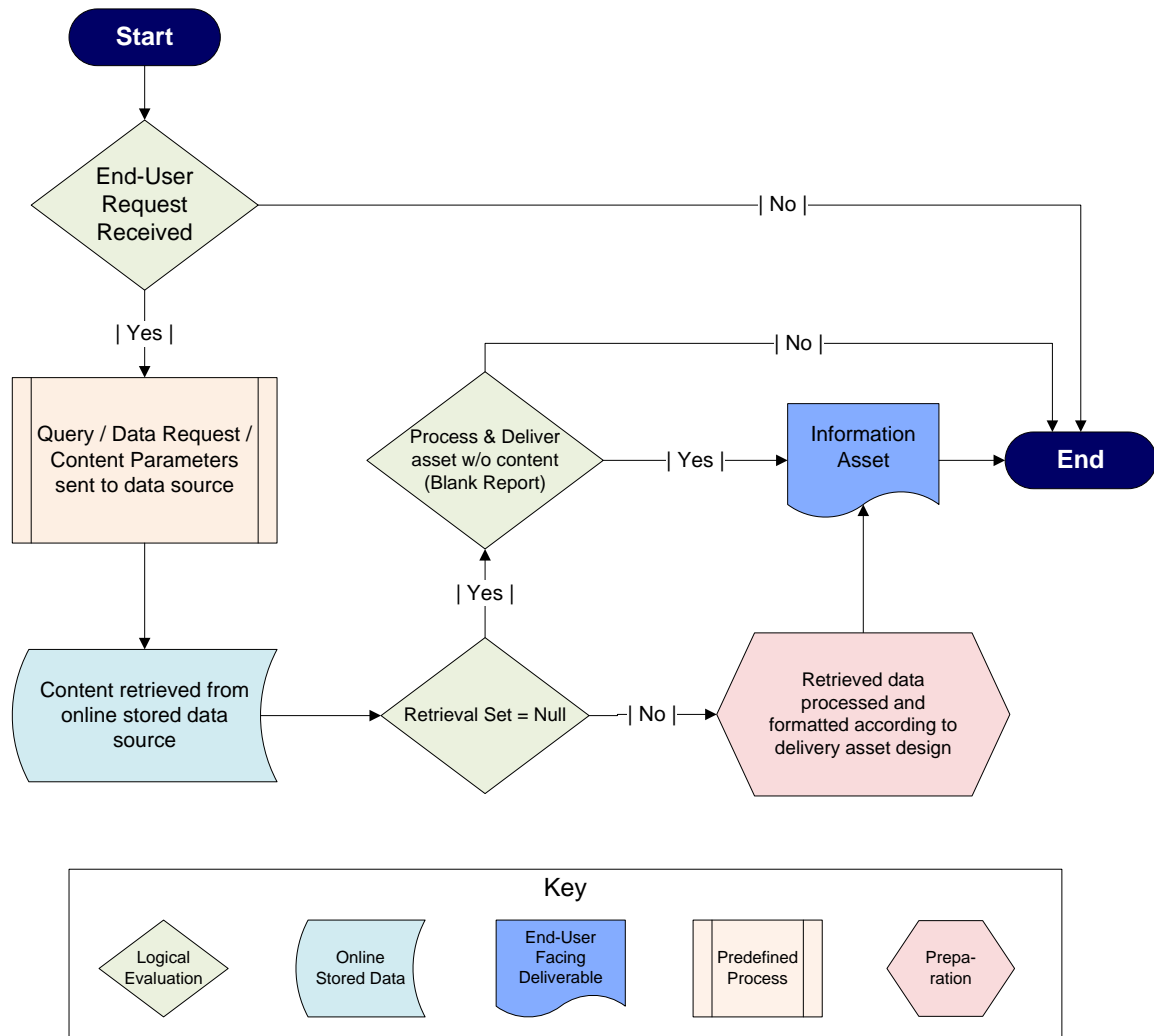
The primary delivery models within an Enterprise Business Information System are defined in the table below.

Delivery Model	Delivery Trigger	Process Description
Push	<ul style="list-style-type: none"> Value of specified field Result of statistical or arithmetic calculation Passage of defined period of time Arrival of specified point in time Occurrence of trigger event Failure of trigger event to occur 	<p>Assets are pushed down to the end user from the source.</p> <p>Push delivery occurs irrespective of a recipient's explicit request for the deliverable.</p> <p>The Push model is often used for compliance documents that must be created/delivered in order to fulfill SLA's, adhere to defined SOP and/or comply with defined regulatory agency pronouncements</p> <p>Push delivery is often used when deliverable content, selection parameters and sort mechanisms are fixed.</p>
Pull	<ul style="list-style-type: none"> User Request 	<p>Assets are pulled down by the end user from the source.</p> <p>Pull delivery is often used when deliverable content, selection parameters and sort mechanisms are variable and limited to a few user-selectable options.</p>
Subscription	<ul style="list-style-type: none"> User Request triggered according to subscription parameters 	<p>Assets are pushed down to the end user via automated processes to the user from the source.</p> <p>The Push only occurs based on the parameters of the user-defined subscription (repeating user request).</p> <p>The Subscription Delivery model is often referred to as the "Hybrid" method as assets are pushed down based on a user request to pull data.</p>

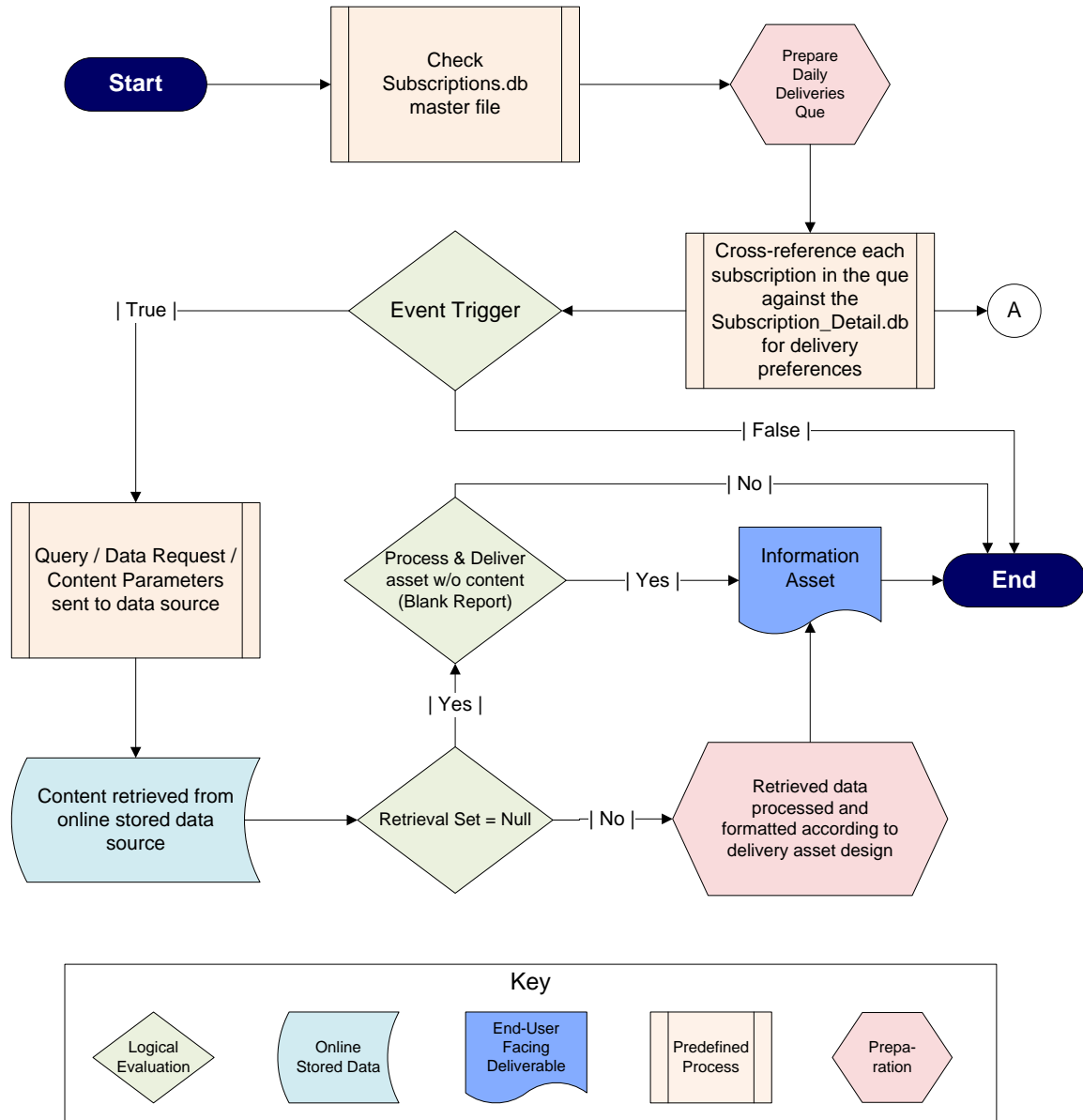
Push Delivery Process Flow



Pull Delivery Process Flow



Subscription Delivery Process Flow



→ **A** Subscription Delivery Detail (User Delivery Preferences Table)

Field Number	Field Description	Field Name	Field Profile	Notes / Valid Field Entries
1	End User Identification	User_Code	<ul style="list-style-type: none"> • Alpha-numeric • Non-Unique • Keyed • Required 	Cross reference against security file to ensure only valid user codes
2	Asset Identification	Asset_Code	<ul style="list-style-type: none"> • Alpha-numeric • Non-Unique • Required 	Cross reference against library master file to ensure only valid codes
3	Date of original subscription request	Date_Orig	<ul style="list-style-type: none"> • Date • DDMMYYYY • Auto-Fill • Required 	n/a
4	Date on which subscription was last edited by subscriber	Date_Edit	<ul style="list-style-type: none"> • Date • DDMMYYYY • Auto-Fill • Not Required 	n/a
5	Date of last subscription fulfillment	Date_Last_Fulfill	<ul style="list-style-type: none"> • Date • DDMMYYYY • Auto-Fill • Not Required 	n/a
6	Number of subscription fulfillments	No_Fulfill	<ul style="list-style-type: none"> • Numeric • Default to 0 	n/a
7	Date of first scheduled fulfillment	Date_First_Fulfill	<ul style="list-style-type: none"> • Date • DDMMYYYY • Required • Default = Today() + 1 	n/a
8	Date of next scheduled fulfillment	Date_Next_Fulfill	<ul style="list-style-type: none"> • Date • DDMMYYYY • Required • Auto-Fill • = [Date_Last] + [Sub_Param] 	n/a

Field Number	Field Description	Field Name	Field Profile	Notes / Valid Field Entries
9	Subscription Frequency	Sub_Freq	<ul style="list-style-type: none"> Numeric Required Default to 1 	(1) Daily Exclude (2) Daily Include (3) Weekly (4) Bi-Monthly (5) Monthly (6) Quarterly (7) Semi-Annually (8) Annually (9) Variable Days (0) Event Trigger
10	Number of days between scheduled deliveries	Days_Interval	<ul style="list-style-type: none"> Numeric Required Default to 1 	<ul style="list-style-type: none"> 1 7 14 30 90 180 365 User Defined
11	Option to suppress delivery when there is no content to report	Blank_Suppress	<ul style="list-style-type: none"> Logical Required Default to "False" 	<ul style="list-style-type: none"> True False
12	Format for end state deliverable	Del_Format	<ul style="list-style-type: none"> Logical Required Default to "True" 	<ul style="list-style-type: none"> True False (T = electronic) (F = hard copy)
13	Location for delivery	Del_Loc	<ul style="list-style-type: none"> Alpha-Numeric Required 	Email address or URL of electronic delivery destination
14 ^a	eMail delivery notification only	eMail_Notification	<ul style="list-style-type: none"> Logical Required Default to "False" 	<ul style="list-style-type: none"> True False (True = email notification only) (False = email information asset)
15	Flag to cancel subscription	Cancel_Sub	<ul style="list-style-type: none"> Logical Default to "False" 	<ul style="list-style-type: none"> True False
16	Date of cancellation of subscription	Date_Cancel	<ul style="list-style-type: none"> Date MMDDYYYY Required when [Cancel_Sub] = "True" 	n/a

^a The eMail Delivery Notification option is only used when the format of the end-state deliverable is electronic. If the eMail_Notification option is set to [True], the end user will receive an email notifying them that the deliverable is available for them to view. When the eMail_Notification option is set to False, the actual deliverable itself is emailed to the end user.

Subscription Delivery Options

Set Subscription Start Date – End users have the option of defining when deliveries are to commence within a subscription. The Start Date is also used to define the delivery dates for Weekly, Monthly, Bi-Monthly, Quarterly, Semi-Annual and Annual subscriptions.

Subscription Delivery Intervals

- **Daily Including** – Asset is delivered every day of the week including weekends
- **Daily Excluding** – Asset is delivered every week day, Monday through Friday
- **Weekly** – Asset is delivered once every seven days commencing on the Date of First Scheduled fulfillment as defined in the [Date_First_Fulfill] field.
- **Bi-Monthly** – Asset is delivered once every fifteen days commencing on the Date of First Scheduled fulfillment as defined in the [Date_First_Fulfill] field.
- **Monthly** – Asset is delivered once every thirty days commencing on the Date of First Scheduled Fulfillment as defined in the [Date_First_Fulfill] field
- **Quarterly** – Asset is delivered once every 90 days commencing on the Date of First Fulfillment as defined in the [Date_First_Fulfill] field.
- **Semi-Annually** – Asset is delivered once every 180 days commencing on the First Scheduled Fulfillment Date as defined in the [Date_First_Fulfill] field
- **Annually** – Asset is delivered once every 360 days commencing on the First Scheduled Fulfillment Date as defined in the [Date_First_Fulfill] field
- **Variable Days** – Asset is delivered once every <<user defined number of days>> commencing on the First Scheduled Fulfillment Date as defined in the [Date_First_Fulfill] field
- **Event Trigger** – Asset is delivered when a specific state exists within the system. States (Events) that may serve as a trigger include but are not limited to:
 - Metric exceeding maximum limit
 - Metric failing to meet minimum limit
 - A data file coming into existence
 - A data file failing to exist
 - The value (True or False) of a logical field
 - A user-defined number of days passing since the last delivery per the subscription

Appendix A – Glossary

Term	Definition
- A -	
Accuracy	A measure of Data Quality. An objective evaluation of the level of defect or degree of error. Precision and Accuracy are synonyms when discussing Data Quality
Agile Approach	A project management methodology based on constant interaction between the project team and user community where progress is reviewed and priorities updated constantly based on changing project forces and user demand
Alert	High-level message from Information Delivery and Business Intelligence system that predicted future state, based on current operations, may not be within acceptable thresholds
Algorithms	Collection of specifically defined rules, steps and processes, to be executed in a specified cadence in order to solve a problem
Asset	Any end-user facing output of an Information Delivery and Business Intelligence system. Assets consist of Reports, Scorecards, Dashboards, Alerts and Warnings
- B -	
Business Intelligence	“BI”. The third level of maturity in the Data Maturity Model. Business Intelligence is the comparative result of information to internal and external metrics
- C -	
Calculations	Arithmetic operations applied to numeric Data in order to convert it into Information
Concatenation	Method of textual data manipulation where multiple strings and/or sub-strings from multiple alpha-numeric data fields are combined to create a new text string. Concatenation is the opposite of Parsing.
Current State	Systems, operations, processes and work flows as defined and in force at the current time
- D -	
Dashboard	Graphic, dynamic representation of current operations updated continuously
Data	A specific characteristic and/or result of an action, work flow, process or operation

Term	Definition
Data Architecture	The underlying structural composition of a data storage unit. Data Architecture documentation represents the “blue print” used to build and support data structures including databases, data warehouses, data stores and data marts. A Data Architecture defines the characteristics and requirements of all data elements within a data storage unit.
Data Freshness	A measure of how recently data has been updated with regards to the most recent operations cycle. The more time that elapses between updates the less Fresh data is considered and the lower the overall data quality measure as less Fresh data is considered less accurate
Data Mart	A collection of data elements grouped according to a common job function
Data Profile	Specific details regarding the characteristics (Type, Format, Picture, Default Value) of each field within a database Architecture
Data Steward	Individual empowered to enforce and oversee the administration of a Governance Model
Data Store	A collection of data elements grouped according to a common reporting asset
Data Structure	The definition and configuration of and relationship between Data Warehouses, Data Stores and Data Marts
Data Update	A revision of existing data and addition of new data to a data storage unit based on all operations and work flows that have been executed since the last Data Update
Data Warehouse	A collection of data elements grouped according to function
Deliverable	See “Asset”
Delivery	Movement of an Asset from the source system to the end user
Downstream Flow	Flow of data from its native source system to a central storage facility (often a Data Warehouse) and the flow of assets from the central storage facility to end users. Data that goes from its native source to a warehouse is said to flow Downstream.
- E -	
Effectiveness	A measure of one’s ability to complete a work stream, operation, process or function such that the end result is the anticipated / expected current state and/or Asset. An operation can be Effective irrespective of whether or not it is efficient.

Term	Definition
Efficiency	A measure of the human and financial costs required for a work stream, operation, process or function to be Effective. An operation may be Effective without being Efficient, but it can not be Efficient without being Effective.
End-User	Consumer of assets generated by and delivered from the Information Delivery and Business Intelligence System.
End State	System, operations, processes and work flows projected to be in force as of the completion of specified project or work stream.
ETL	Extraction, Transformation and Loading of data as it flows Downstream from it's native source to a centralized data storage facility
Event	A metaphysical state of being inside the Enterprise that has significance within the Information Delivery and Business Intelligence System. Also see "Trigger"
- F -	
Firewall	A system of related security measures and access devices within a technological environment in place to control and monitor access to data elements
Format	Physical presentation design of assets; Placement and presentation details of Reports, Scorecards and Dashboards. Also see "Layout".
Future State	Systems, operations, processes and work flows projected to be in force as of a point in time that has not yet occurred but is still to occur
- G -	
Gated Approach	A project management methodology based on interim interactions between the project team and user community. The occurrence of these interactions is tied to the accomplishment of certain goals or the completion of some phase of design of an end-state asset
Governance	A system of security measures, data quality measures, data management processes, user password protocols and technology standards administered and overseen by Data Stewards
- I -	
Information	Numeric, Date and Time Data elements that have been manipulated according to arithmetic and/or statistic operations. Textual Data elements that have been manipulated according to alphanumeric manipulations including Concatenation and Parsing
Information Asset	See "Asset"

Term	Definition
- L -	
Layout	The physical configuration and design of of an Information Asset. Also see "Format"
- M -	
Metadata	A component of the Information Delivery and Business Intelligence system that translates user requests for information and BI into executable queries. The Metadata component translates end-user speak into computer-speak
Metric	A unit of measure defined by an Enterprise as an indication of process, operations or work stream results and/or impact
Mining	Collecting data elements from the results of operations, procedures or work streams
- P -	
Parameters	Boundaries set to control Data, Information and Business Intelligence content presented in Reporting Assets. Parameters may be numeric, textual or date/time in format and are often provided in pairs with one upper and one lower boundary. Exceptions include single parameters provided when a standard deviation is allowed as a qualification for content inclusion
Parsing	Separating a single textual string into multiple textual strings. Parsing is the opposite of Concatenation.
Portal	A gateway through which end users can access both the Presentation Layer and certain Information Assets. Intranet Portals are contained within a private internal network while Extranet and Internet Portals are available for use to authorized users outside the Enterprise.
Pull Delivery	Method of presenting Information Assets according to a specific user request
Push Delivery	Method of presenting Information Assets automatically to end users irrespective of a specific request
- Q -	
Query	Commands and parameters passed to a data source resulting in the extraction of a sub-set of data that is valid given the limits of acceptability defined by the parameters
- R -	

Term	Definition
Relevance	A measure of Data Quality. A subjective evaluation of the degree of impact Data, Information or Business Intelligence can have at a point in time
Report	A type of Information Asset. Detail Reports contain specified data elements for all records that fall within the defined selection range. Summary Reports contain statistically and arithmetically calculated Information that present a macro view of the content of a related Detail Report. Exception Reports display specific data elements for records that fall outside the defined selection range.
- S -	
Scorecard	A type of Information Asset. A static, numeric and textual summarized representation of the results of actions, work streams, operations or processes executed during a previous time period.
Security	Protection of the Intellectual Assets that are Data, Information, Business Intelligence and the calculations, methods and processes by which they are created.
Steward	See "Data Steward"
Strategy	Collection of actions, work streams and processes designed to accomplish a defined end state
Subject Matter Expert	Individual with deep level of understanding and extensive experience in a specific area of business operations or function
Subscription Delivery	Method of presenting Information Assets to end users where the asset is automatically Pushed to the end user based on the specific delivery details included in a Subscription. A Subscription is a user request for information that is issued once by the end user and then retained within the system and repeated according to a prescribed cadence
- T -	
Timeliness	A measure of Data Quality. A subjective comparative evaluation between when an Information Asset is received by an end user and when that Asset may impact the end user's actions, decisions and/or work streams.
Trigger	An metaphysical state that, once achieved, will cause an action or series of events to occur. Please also see "Event"
- U -	
Upstream Flow	Flow of data from end users to a central data storage facility. Data that is manually entered into the system is said to flow Upstream.
- W -	

Term	Definition
Warning	High-level message from Information Delivery and Business Intelligence system that current-state is not within acceptable thresholds