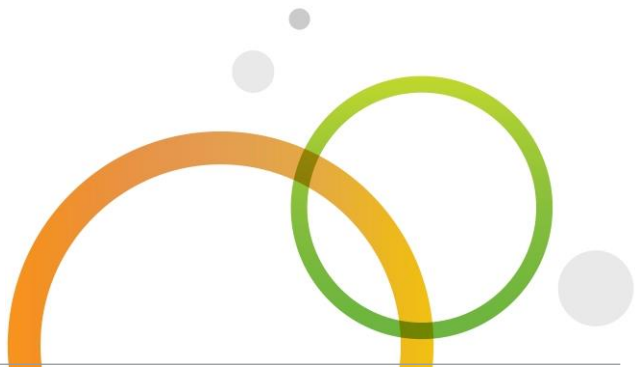
# Qlik Deployment Framework

## Qlik Product Delivery Process

March, 2017



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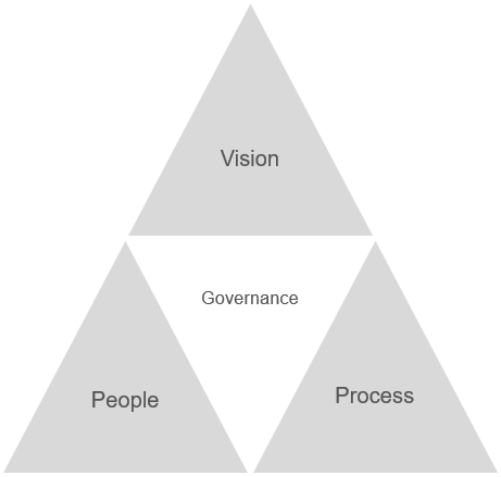
**Qlik Product Delivery Process v1**

## Pillars of success

This document intends to explain Qlik delivery process from initial cloud based discovery phase to an on-site platform deployment and possible steps in-between. Before process breakdown let's go through the three pillars needed for successful governance in general.



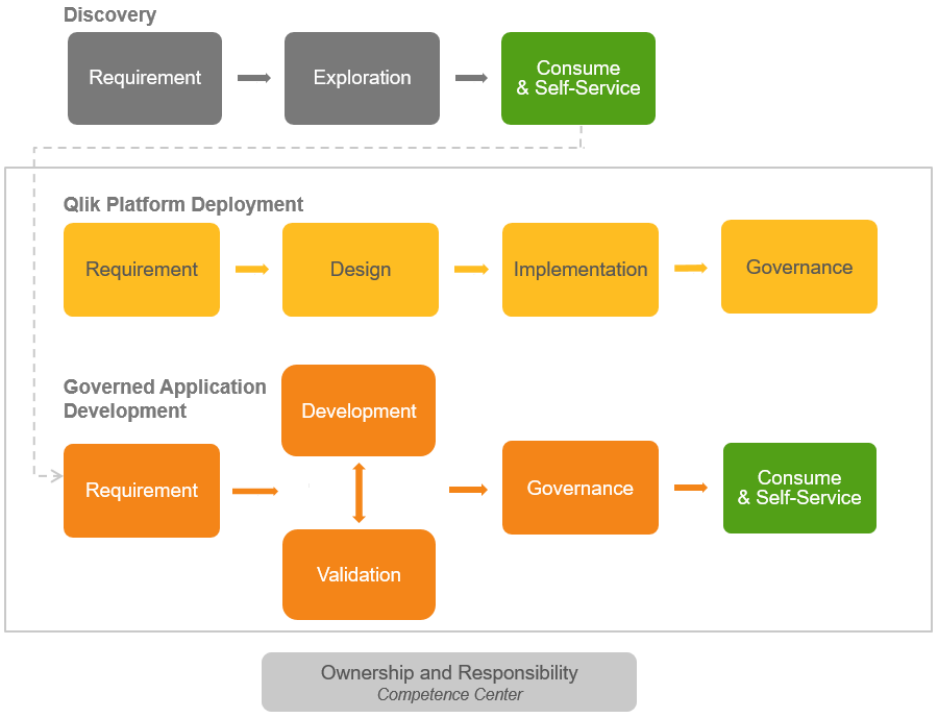

First a clear **vision** on what to accomplish is needed, second the right **people** must be engaged to turn the **vision** into reality. Last **processes** need to be established aligning the **vision** and the **people.**

**The three Pillars broken down:**

- **Vision**
  - **Need** What needs does the organization have and how do we fulfill theses?
  - **Goals** What is our short and long term goals with this project and how do we get there?
  - **Strategy** What is our strategy to reach the setup goals?
- **People**
  - **Roles** What roles and teams do we need and whom could fit these?
  - **Responsibility** What responsibilities should each role and team have?
  - **Organization** How do we organize the teams? DevOps is one example of teamwork
- **Process**
  - **Requirements** gathering of processes and platform requirements.
  - **Best practices** could we reuse instead of reinvent?
  - **Platform** what platform is needed to reach set goals?

## Qlik Product Delivery Streams

Qlik delivery process is broken down into several self-contained process-flows or delivery streams. Each stream is broken down into a set of blocks describing the processes within each stream. The blocks will also have a bullet list of actions within each block. Not every Qlik delivery need all streams also some might start small and expand along the way.



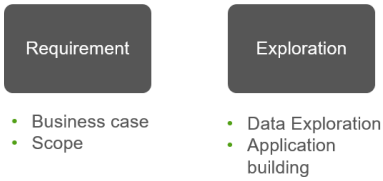

*The overall Qlik Deploy process on block level. From discovery phase to Governed Deployment*

**Delivery streams:**

- **Discovery** is a data exploration stage where Qlik can create instant value and insights. The process is generic and can be utilized for any kind of data exploration, smaller projects and much more.
- **Self-Service** in this phase business users can consume but also investigate, create and share personal insights. A Self-Service outcome can be the base for a prototyping exercise.
- **Prototyping** power user and/or Business Analyst can start prototyping, adding data sources and enhancing the application (using a copy). These enhancements can be the base for the application enrichment done in the Fast track phase.
- **Ownership and Responsibility** for the processes should be defined in a forum, a *Competence Center*. Other definitions are *Qlik Competence Center (QCC)* and *BI Competence Center (BICC)*.
- **Governed Application** This process focuses on governed applications deliver for a wider audience, including quality and security assurance
- **Fast Track** used when enriching applications that have already passed the governed development process. This will be a faster process than the governed application development as only the enhancements need to be validated.
- **Qlik Platform** is the process to implement and integrate the Qlik platform into enterprise requirements and strategies

# Qlik Discovery


**Discovery** is a data exploration stage where Qlik can create instant value and insight, use this process solve a business problem (use-case). Associating and analyzing data using *Qlik Indexing Engine* (QIX) it's possible to find solutions not possible with any other analytics tool. This process is generic and can be utilized for any kind of data exploration or for smaller projects that do not need the same governance and control as a *Governed Development project.*




*The discovery process is divided into the blocks **Requirement** and **Development***

## Action list

### Requirement

Before starting Qlik discovery it's a good idea to have clear objectives.

- **Business Case** The main requirement for discovery is to solve a business problem.
- **Scope** examples:
    - **Participants:**
      What roles is needed to solve the problem?
      Whom will fit into those roles? (Users can have multiple roles)
    - **Requirements and boundaries:**
      What will be the focus point in the use case?
      What are we most eager to solve in the given time frame?
      Are there any requirements that can be moved to a later stage?
    - **Data sources:**
      What data sources need to be accessed to solve the use case?
      How do we access these data sources?

### Exploration

- **Data Exploration** This is the main discovery phase to solve the scoped business problem leveraging Qlik association engine. This can be done using Qlik Sense Desktop, Qlik Sense Cloud, Qlik Sense Enterprise or QlikView Developer.
- **Application building** create applications, visualizations and stories

## Discovery Workshop

*Discovery Workshop*, stakeholders collaborate to solve a business problem in a workshop environment, leveraging the *discovery* process. A *Discovery Workshop* could be the first step towards *Governed Application*. After understanding the business problem, exploring and discovering a solution this can become the start to produce a governed application.

## Consume & Self-Service

Applications can be consumed by a wider audience after *Discovery*, *Governed Development* or *Fast Track* process.


### Action list

- **Consume** Data in a Qlik application can be analyzed in multiple ways:
  - Free text search within your data
  - Select/ deselect without any drilldown path
  - Analyze from maps and graphs
- **Share** your findings with other using storytelling, pdf/xls export or invite others into the application.
- **Self-Service** Modify, enhance or create graphs and maps based on the underlying data set. Combine and create expressions to solve a personal problem.
- **Promote** Applications to be enriched to any of *Discovery*, *Governed Development* or *Fast Track* process.

## Qlik Governance Overview

A governed platform and deploy process becomes critical to companies/governments that have regulation and regulatory requirements to oblige. In this section we will focus on Qlik as a governed platform across the infrastructure and development processes. This includes architecture and infrastructure requirements that Qlik as a platform need to comply to as well as security considerations, internal processes and more.

**Governed Platform and Development separated into these separate process streams:**

- **Ownership and Responsibility** for the above recommended processes to be in place assign the roles and responsibilities. This is usually named a Competence Center
- **Governed Application** This process focuses on governed applications deliver for a wider audience, including quality and security assurance
- **Qlik Platform Deployment** is the process to implement and integrate the Qlik platform into company strategy and process.
- **Fast Track** used when enriching applications that have already passed the governed development process. This will be a faster process than the governed application development as only the enhancements need to be validated.

## Ownership and Responsibility

Each process block needs ownership (roles with assigned responsibilities) with a delivery checkpoint to the next block. Competence Center is a cross-functional team owning the process and thereby assigning roles and ensuring involvement from stakeholders.

## Competency Center

The idea of Competence Center is to be an “BI umbrella” for throughout the organization, and in this role defining the processes surrounding the Qlik platform so that it fits in with the overall BI strategy and company policies. The need for a competency center arises when the sharing of central services, expertise and governance become practical and cost effective. This can happen with distributed development teams, business development teams and large development teams that are either cross-functional or not co-located. Gartner are advocating that companies need a CC to develop and focus resources to be successful using business intelligence. Other definitions are *Qlik Competence Center (QCC)* and *BI Competence Center (BICC)*.

## Action list

Below is high-level action list for a *Competence Center*


### Roles

One of *Competence Centers* task is to define and approve the roles involved in governed application and platform delivery, a team member can have several roles. Below are some role examples, business assigned roles are green and IT assigned roles are orange.

- **Application Owner** (*Business Owner, Project Manager*) there must always be an owner and responsible for governed applications, that decides application use-case and scope. As well as continued application enrichment using the *Fast Track.*
- **Business Analyst** (*Data Analysts or Data Scientists, Data Quality Tester*) defining the specialist on the use case and understands the data of the application.
- **Qlik Developer** (*BI Expert*) professional application developer (data model, application objects and master items) to fit the governed criteria’s
- **System Administrator** (*IT System Owner, Technical advisor, DBA, System Tester,..)* are all supporting IT roles that are useful during the process as platform owners and administrator to grant access rights and promote content between environments.

- **Business User** (*Consumer*) is the application consumer, Business Users can do **Self-Service** exploration for personal insights.
- **Power User** Is an application consumer (*Business User*) that understands the data well and uses this knowledge to evolve the application (**Self-Service)** for personal use and to share with others.

**Ownership and Responsibilities**

Clear ownership and responsibilities for each or the approved roles should be defined and documented

**Change management**

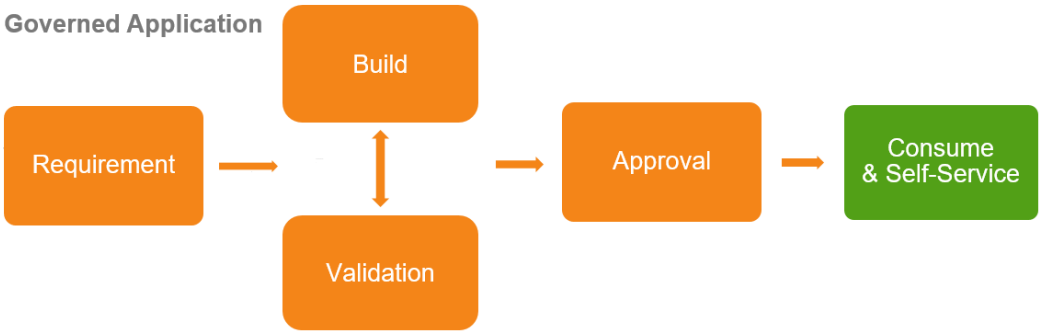
One idea of the Competence Center is to be an "BI umbrella" for throughout the organization, and in this role defining the processes surrounding the Qlik platform so that it fits in with the overall BI strategy and company policies. Read more on change management in the ***Qlik Deployment Framework-Qlik Sense Deployment Guide.pdf*** document.

**Qlik defined change management actions are:**

- **Application Lifecycle management** is the life and death of a governed application within Qlik platform, meaning from creation, development, promotion process and refinement.
- **Deploy process (or DTAP)** this is the application delivery process going from test to production.
- **Deployment security segmentation** whom have access to what?

## Governed Qlik application

A governed development process encourages resource reusability, single point of truth and contains more validation points, but this does not mean that the process is a slow and ridged. Using sprits and fast track keeps development time down to minimum. Also, applications created in the discovery phase can easily be merged into this governed process.

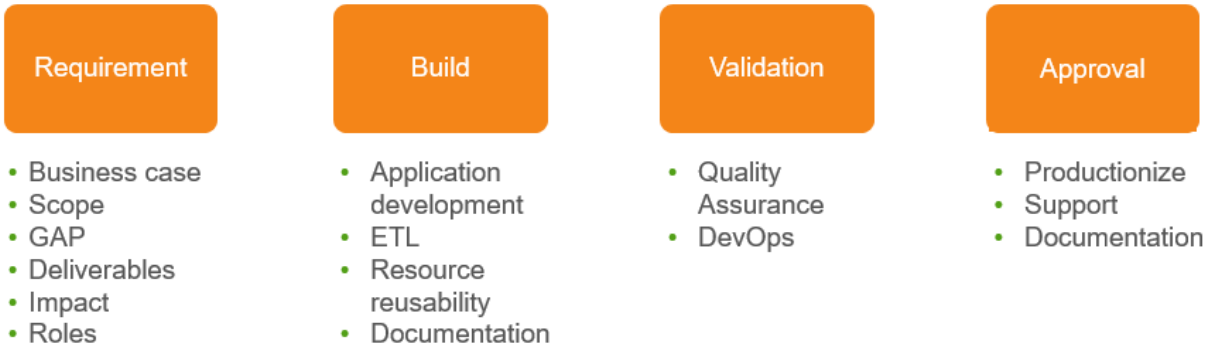



### Qlik Deployment Framework

During governed development recommendations are to use Qlik Deployment Framework (QDF) and align a container architecture based on development requirements, read more in the **Qlik Sense Deployment Guide**. QDF available for free on Qlik Community.

## Action list

Qlik Application Development process blocks broken down into actions.




### Requirement

Before project start business requirements, objectives and roles should to be defined.

- **Business Case** What is the business problem that should be solved? For whom is the app intended?
- **Scope** includes:
    - **Requirements and boundaries:**
      What will be the focus point in the use case?
      What are we most eager to solve in the given time frame?
      Are there any requirements that can be moved to a later stage?
    - **Data sources:**
      What data sources need to be accessed to solve the use case?
      How do we access these data sources?
    - **Risk assessment** are there any risks?
- **GAP** Have or should a GAP analysis of the business case be conducted?
- **Deliverables** what deliverables should this be the outcome of this project?
- **Impact** what would the impact be if the business case was resolved using Qlik?
- **Roles** What roles is needed for this project and in what phases? Roles widely used are Qlik Developers, DBA, Power User

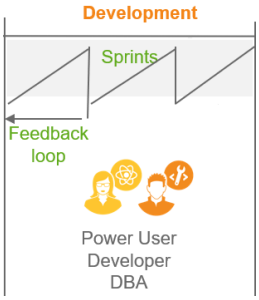
### Implement

After the requirements are set the implementation phase begins, usually in one or two week sprints depending on the project scope.

- **Application Development** recommendations to use a structures development method, please use QDF mentioned earlier. Read more in **Qlik Sense Development Guide.pdf**
- **ETL** (Extract Transform Load) questions
    - ETL process needed for this application?
    - Any previous cached data that can be reused?
- **Resource reusability**
    - Reuse of QVD cache data?
    - Reuse expressions and variables?
    - In what containers are they stored?

### Development sprints

Multiple iterations in short sprints between the *development* and *validation* processes creating a feedback loop from the Business (Power Users and business owner) to validate scope accuracy and scope creep during development.




### Validation

After each development sprint the validation phase takes over, main focus here is Quality assurance that the data and expressions are correct and that the application is in the specified scope.

- **Quality assurance** focus in this phase is to validation the application quality in terms of performance and content. Promotion of application to validation (*Acceptance Test*) site/area could be needed.
    - Application Performance
    - Content validation, is the data and analytics correct?
    - Application size on disk and in memory
    - Are we still within the assigned scope parameters?
- **DevOps** Development and operations takes joint effort during validation phase to ensure a smooth delivery to business.

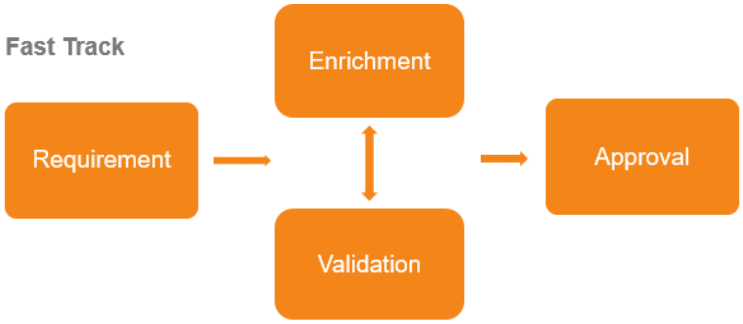
### Approval

This is the release approval stage before application release to set/validate security access and ensure quality of service.

- **Productionize** is the movement of the application to production, this includes:
    - Promote application from *Acceptance Test* to production site/area could be needed
    - Set/validate application security
- **Documentation** should be completed before application release
- **Support** and education (internal) could be involve for a friction free release

# Fast track

Fast track is a governed *Application Enrichment* process. *Fast track* process is used to enrich applications after they are published to a wider community (using Governed development process). Use fast track process to (in a governed way) enrich published applications. Collecting feedback from business users and with the help of Self-Service delivery mechanisms Qlik Applications evolves continuously during its life cycle. Fast track is a fast and minimalistic process.




## Action list

### Requirement

- **Business Case** Is it the same case as before? Why are enhancements needed?
- **Scope** includes:
    - **Requirements and boundaries:**
      What is the focus point for this enhancement?
    - **Data sources:**
      Any additional data sources needed? How do we access these data sources?
    - **Risk assessment** are there any risks adding suggested enhancements?
- **Deliverables** what deliverables should this be the outcome of this enhancement?
- **Roles** What roles is needed for this project and in what phases? Roles widely used are Qlik Developers, DBA, Power User

### Enrichment and Validation

Same as *Governed Qlik application development*

### Approval

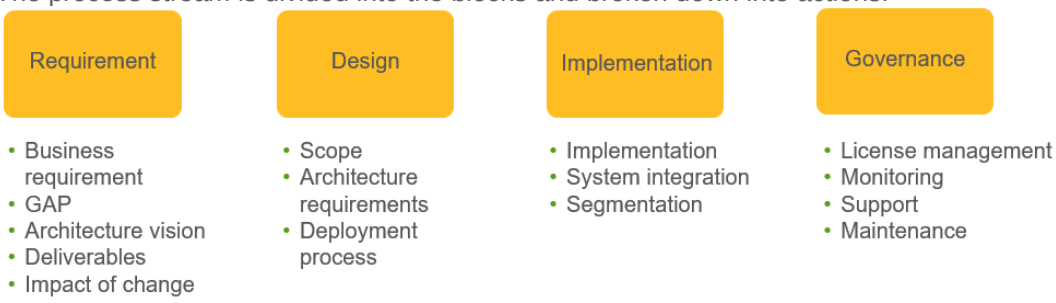
Simplified approval as most governance steps already done in the initial application development phase. Application owner need to give a release go ahead.

- **Productionize** is the movement of the application to production, this includes:
    - Promote application from *Acceptance Test* to production site/area could be needed
    - Update application security if needed
- **Documentation** should be complemented before application release

# Qlik Platform

Start using Qlik and getting value is instantaneous using Qlik Cloud and Qlik Sense Desktop. But when expanding Qlik in the organization the need of control becomes greater. Here is where the Qlik platform comes in that can be deployed in countless ways depending on needs and regulatory requirements.

The process stream is divided into the blocks and broken down into actions.




## Action list

### Requirement

- **Business requirement** Is it the same case as before? Why are enhancements needed?
- **GAP** Have or should a GAP analysis of the business case be conducted?
- **Architecture vision** to define the key business requirements and the constraints
    - Roles and responsibilities for architecture
    - What are the benefits of the proposed design? What business goals will be achieved?
    - Define what is in and what is outside the scope of the architecture
    - Resource and competence availability
    - Budget
    - Expectations
    - Technical requirements specification
    - Deployment method
    - Agility
    - Guidelines
- **Deliverables** What are the deliverables for this solution**?**
    - Define implementation phases
    - Define roles for each area
    - Type of infrastructure to be used
    - Accessibility, on premise or cloud or hybrid
    - Implementation timeframe
    - Number of environments
    - Environments purpose
    - Uptime requirements
    - Deployment process
    - Testing
    - Load testing
    - SLA

- **Impact of change** This is the risk analysis when implementing a new system
    - Effect of other system
    - Customizations
    - Policies
    - Technology principles

**Design**

- **Scope** What is included in the platform of design
    - Servers alternatives
    - Security policies to follow
    - Storage alternatives
    - Network
    - Firewall
    - Integrations
    - Data sources
    - Software versions
- **Architecture Requirements**
    - Resilience
    - Redundancy
    - Segmentation of environments
    - Performance
    - Backup and restore
    - Security
- **Deployment process**
    - Manually steps
    - Automation
    - Workflow
    - Tools to be used

**Implementation**

- **Implementation** These are the installation points
    - Type of installation
    - Installation phases
    - Installation package
    - Installation lifecycle
- **System integration** Qlik Interfacing against other systems
    - Configuration need for integration
    - Installation or guidelines specification to be followed
- **Segmentation** Segmenting the platform into several tiers
    - If there is a need of segmentation due to various security reason, make sure to verify installation and configuration follows up upon security requirements

**Governance**

- **License management** rules and processes to keep track of licenses usage
    - Usability of the bundled license application
    - Follow-ups of license usage
    - Proactive work
- **Monitoring** of the system, including log management
    - Usability of the bundled monitor application
    - Proactive work
- **Support** Preparations for including Qlik into the internal support
    - Support alternatives, external and internal
    - Knowledge needed and required
    - Education needed
    - Support channels
    - Support agreements
    - SLA requirements
- **Maintenance** Creating clear guidelines in how to maintain the system, this includes backup
    - System maintenance guide