**Week 1**

**BI 101**

Identify issues before they become problems or act on opportunities before their competition is key to intelligent decision-making, by:

* Gathering information about current metrics and processes.
* Organize this data within the database systems
* Deliver it to new tables that report the results for stakeholders

**BI Teams (Who are the related professionals in our company?)**

* API professionals
* Data warehousing specialists
* Data governance professionals
* Data analysts
* IT professionals
* Project managers

**Data Analyst VS Business Intelligence Analyst**

Data analyst – Is this data needed to get our analysis? More descriptive and technical in nature  
BI analyst – What do our stakeholders expect form our analysis? Streamlines the data into dashboards to tell a story

**Stages of BI**

* Capture - what happened
* Analyze - why did it happen
* Monitor - what's happening now

**Key business intelligence documents (IMPORTANT)**

* Stakeholder Requirements [Document](https://docs.google.com/document/d/11K4eqc_rhZql__yg9sqDYFP5GnV1dAkHr36NqIUyG5I/template/preview)
* Project Requirements [Document](https://docs.google.com/document/d/1Vq9G_MAQRz4V6iZF_Z-v_u0AcwloB96lc6wwYzz9EDg/template/preview)
* Strategy [Document](https://docs.google.com/document/d/13v9_pOAHbcv2dhEMZtPFJ6sgvZaY-9tVp1op32owAdE/template/preview)

**Technologies and best practices**

* Modular design
* Verify data accuracy and integrity
  + Completeness
  + Consistency
  + Conformity
  + Accuracy
  + Redundancy
  + Integrity
  + Timeliness
* Create a testing environment
* Build dynamic dashboards
  + **Centralization**
  + **Visualization**
  + **Insightfulness**
  + **Customization**
* Effective vizes
  + Pre-attentive attributes
  + Design principles
  + Avoiding misleading or deceptive charts

**Week 2**

**Key Stakeholders in a BI Project**

* **Project sponsor**
* **Developer**
* **Systems analyst**
* **Business stakeholders**
  + **Executive**
  + **Customer-facing**
  + **Data Science**

**Considerations when conversing with stakeholders**

* Ask the right questions
* Define project deliverables
* Effectively share BI

**Couple of good questions to consider:**

* **Who is your audience?**
* **What do they already know?**
* **What do they need to know?**
* **How can you best communicate what they need to know?**

**Extra points to note**

* **Create realistic deadlines**
* **Know your project**
* **Communicate often**
* **Keep an open mind to factor bias and fairness**

**Week 3**

**Importance of Context**

* **Centralize understanding of everyone who views the dashboard**
* Eliminate the risk of misinterpretation
* Gives something greater meaning to help people understand it more completely.

**Improve Dashboard Context**

* Centralize Dashboards
* Prioritizing the cross-functional relationships that exist within your organization.
* Set common methods to use dashboards

**Data Availability challenges**

* Integrity - accuracy, completeness, consistency, and trustworthiness of data throughout its entire life cycle (Through duplicates, missing information, inconsistent structure, or not conforming to business rules.)
* Data visibility - degree or extent to which information can be identified, monitored, and integrated from disparate internal and external sources
* Update frequency - disparate sources to refresh at different times, such as weekly versus monthly
* Change – Altering data Due to internal or external procedures

**Data that needs to be anonymized**

* Telephone numbers
* Names
* License plates and license numbers
* Social security numbers
* IP addresses
* Medical records
* Email addresses
* Photographs
* Account numbers

**Limitations of Data**

* Missing Data
* Misaligned data
* Dirty data

**Types of bias**

* Confirmation
* Selection
* Historical
* Outlier

**Address bias**

* Document past beliefs/ assumptions
* Randomize data
* Find more data on opposing hypothesis
* Awareness of outliers

**How to identify key metrics for a project**

* **Limit The number of metrics**
* **Alignment with business objectives**
* **The necessary technologies and processes**
* **The cadence of data – Most important metrics on top**
* **Use SMART methodology**

**North Star Metrics - The guiding star. Good for:**

* **Cross-team alignment**
* **Tracking growth**
* **Focusing values**

**Choosing a north star metric**

* What is essential to this business’s processes?
* What are the most important KPIs being measured?
* Out of those KPIs, what captures all of the necessary information about this business?
* How can the other metrics be structured around that primary metric?

**Bridge the gap from current state to ideal state <Gap Analysis>**

## Setting direction with stakeholders

## Context and data quality

## Building structures and systems

## Sharing findings

## Acting on insights

**Week 4**

## Executive summaries [document](https://docs.google.com/presentation/d/1FCEK660dRJ3aLm7P0mOBaiUTeZ9kopPDx2P-LOGdWt4/template/preview?resourcekey=0-peLLpo6s5dU8RLGAeZkr8g#slide=id.g146c7616c4c_0_24)