

# Approach to Snowflake Pilot Implementations

Wipro

# Wipro today

## Sustained Growth



**\$7.7Bn**

IT Services Revenue  
in FY 2016-17

**Designit®**  
a wipro company

Leader in  
strategic design and  
design thinking

## Strong Partnership



**1244\***

Active  
global clients

**APPIRIO®**  
a wipro company

Leader in the Cloud, CX –  
Salesforce, Workday, Google

**topcoder™**

## Attracts the Best Talent



**166,790**

Workforce

**wipro ventures**

Strategic Investment arm  
of Wipro – \$100m fund



## Global Footprint



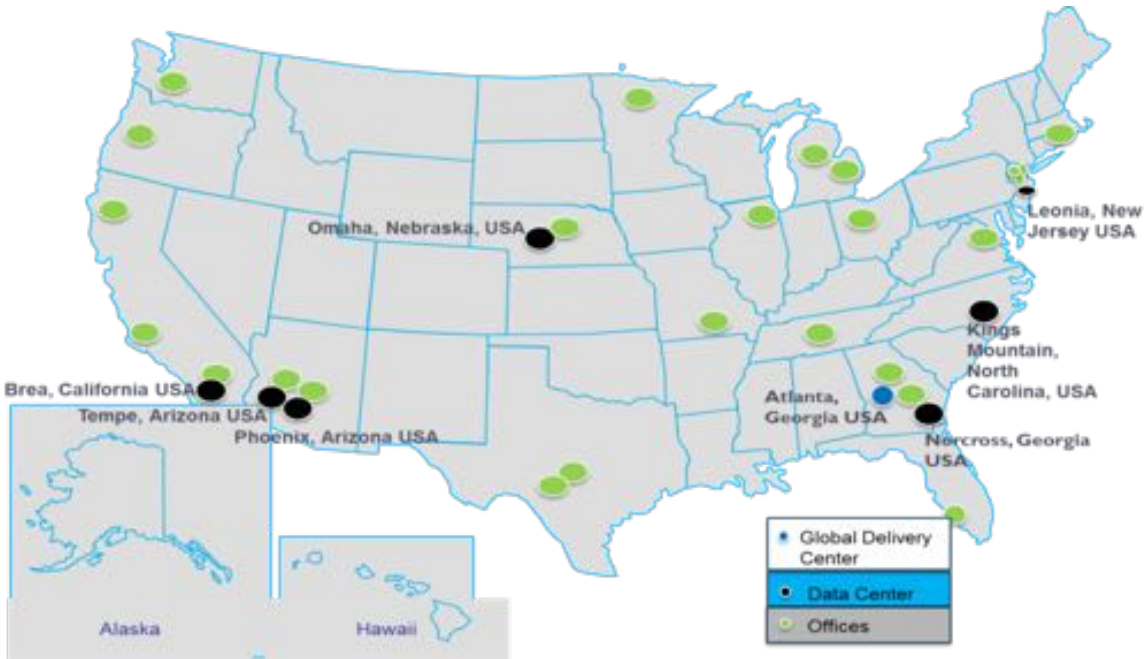
**65**

Employee presence  
in 65 countries

**wipro holmes**

Wipro's Artificial  
Intelligence and Hyper-  
automation Platform

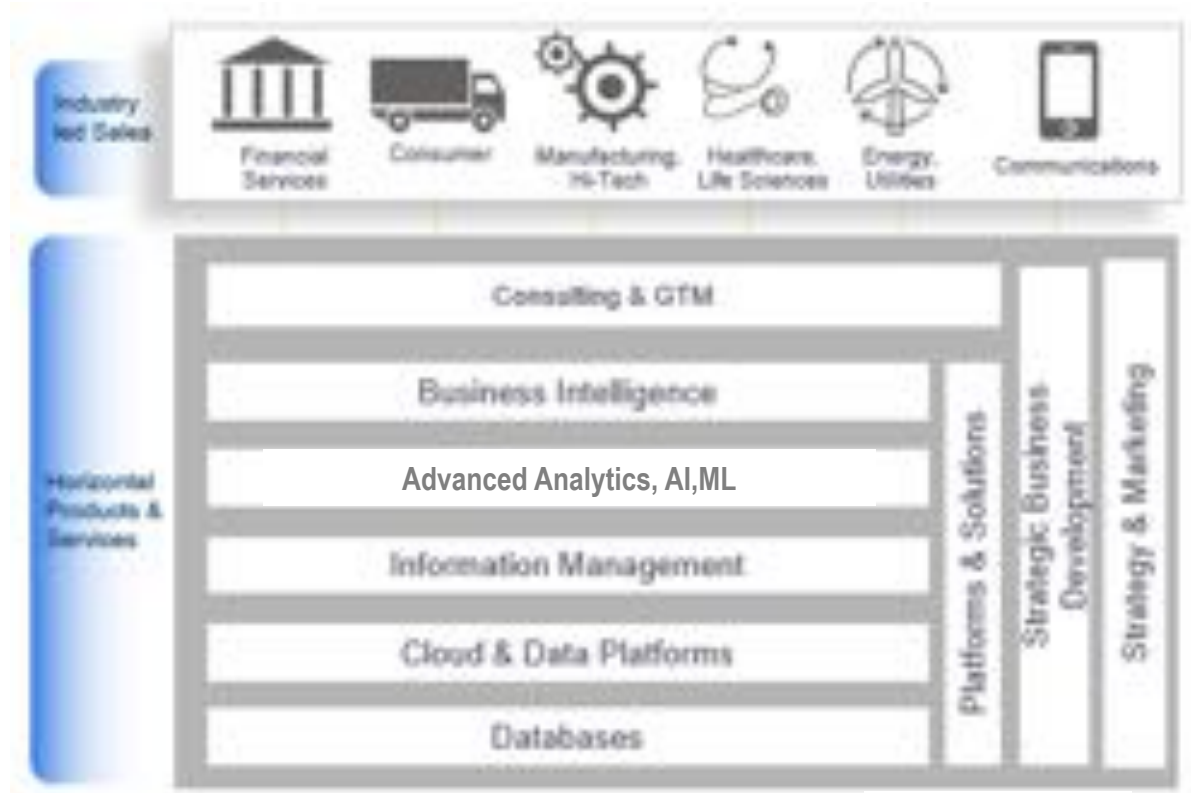
# Wipro in USA



- ✓ Wipro US HQ in New Jersey
- ✓ Silicon valley Innovation center in Mountain view California
- ✓ Listed on NYSE in 2000
- ✓ 24 Offices, 1 Global Delivery Center and 7 Data Centers
- ✓ 400+ US based Clients
- ✓ 11000+ Employees , 40% are local hires
- ✓ Over \$1 Billion Investments in the US through Acquisitions



# Wipro Analytics



# Approach define a roadmap for success

Where are we?

How do we get there?

Where do we want to be?



## DATA

- Lack of consistent data definitions across functions
- Data not fully utilized:
- Data quality issues
- Data latency
- Large data volumes



## PEOPLE

- People spend too much time producing reports instead of drawing insights
- Cultural shift to get to visualization (people are used to reports)
- Competency gaps (in some functions)



## METHOD

- Agile vs. waterfall
- The growth of shadow IT teams in the business
- Lack of clear ownership of Data



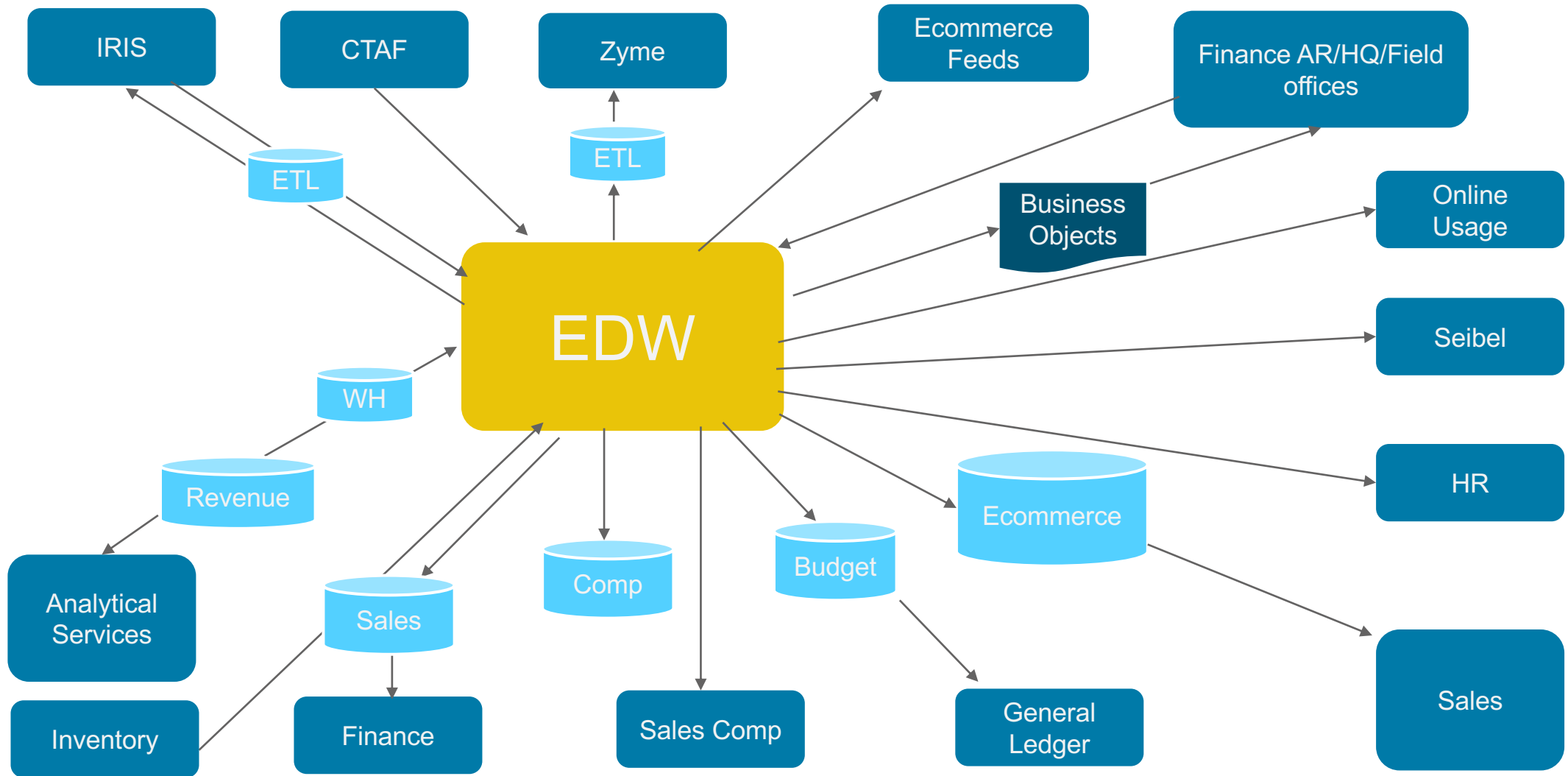
## TOOLS

- Driven functionally vs. enterprise
- Short-term fixes, “band aids”
- Focused on the past, not the future
- Lack of scalable DWH, process, tools

**Data Integration : 80% ; Analysis : 20% time spent**

Intel, “Extract, Transform, and Load Big Data with Apache Hadoop,” 2013

# Does this look familiar?



# Let me tell you a story : Step back to Zambia, circa 1971 (credit - Ernesto Sirolli -TED talk)

## Peace Corp in Zambia

*Hey, your soil is so fertile why don't you grow cash crops like Tomatoes?*

## Zambian Farmer

*No, but look at this juicy tomato I got from my farms.*

*Oh yeah, lets go check out your farm*

Some 200 hippos came up from the river and they ate everything

And we said to the Zambians, *my God, the hippos.*  
And the Zambians said, *yes, that's why we have no agriculture here.*  
*Why didn't you tell us?*  
***You never asked.***

# Listen to the voice of the customer and then...

Spend time to reflect and gather data on the current state

Where do we want to be?



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# Here is an example to take stock of your inventory

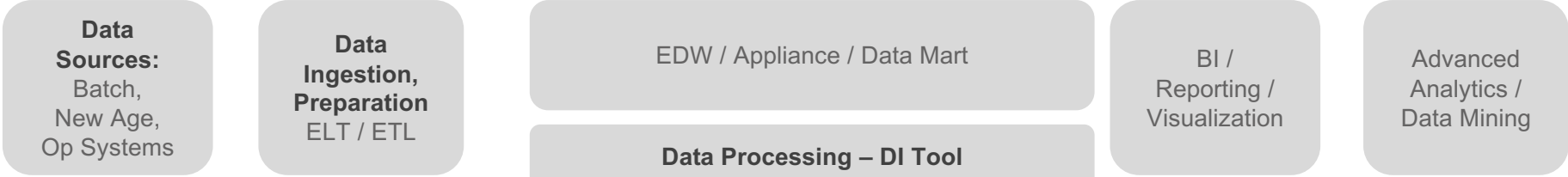
Application name				
Cost				
Data Vol.	XXTB			
Automation				
		Complexity %		
Objects	Count	Simple	Medium	Complex
Tables	200-300	60%	20%	20%
SP	80-100	60%	20%	20%
BTEQ	80-100	60%	20%	20%
ETL	200-300	60%	20%	20%
Reports	120-150	60%	20%	20%
Macros	0	60%	20%	20%
Pre/Post SQL	8-10	60%	20%	20%
Views	8-10	60%	20%	20%

Complexity			
Definition:			
Data Migration			
Component Type	Simple	Medium	Complex
Data Migration	Columns<=30 Data Volume<=5GB Special Characters:N Incompatible Datatype:N	Columns:31-70 Data Volume: 6GB-20GB Special Characters:N Incompatible Datatype:Y	Columns:71-150 Data Volume: 21GB-100GB Special Characters:Y Incompatible Datatype:Y

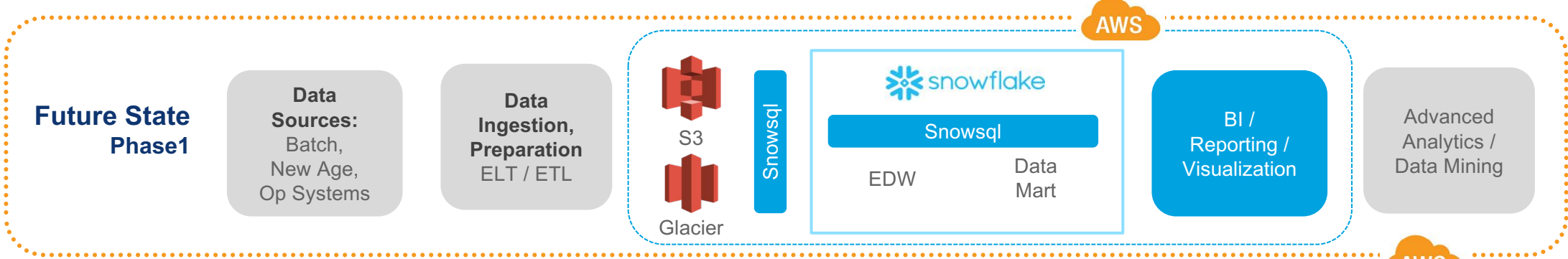
Stored Proc/BTEQ/Views			
Component Type	Simple	Medium	Complex
Stored Proc/BTEQ/Views	Columns<=100 Number of tables joined-3 Number of calculated variables-10	LOC<=250 Number of tables joined-6 Number of calculated variables-20	LOC<=1000 Number of tables joined-10 Number of calculated variables-40

# AS IS landscape and future roadmap

## Current State



## Future State Phase1



## Future State Phase2



On Premise Cloud

# Automation – framework & reusable assets

## SnowPro

### SnowPro for Migration

Manual conversion SQL, SP, Macros are time consuming & complex tasks.

Wipro's SnowPro ensures end to end automatic conversion of these SQLs into Snowflake Queries. The tool is recognized by Snowflake vendor and our esteemed clients. Our dedicated team will customize & enhance the tool to cover majority of code patterns.

**Expected benefits :**  
**Approx 70% savings in SQL Conversion Effort using SnowPro productivity accelerator.**

## CDRS

### CDRS for Data Migration

Migration of this huge table volumes, data volumes to a new cloud database is a time consuming and erroneous process. Wipro built an automated End to End DB migration accelerator which can be used to migrate Data to Snowflake along with data reconciliation routines.

Tool provides reusable scripts for Historical data migration & Incremental loads will save migration efforts.

**Expected benefits :**  
**Average 50% Productivity gains in migration effort using CDRS for data migration and reconciliation.**

## RepoCHK

### RepoCHK for Report Validation

Validation of Reports after re-pointing the DB connection to Snowflake is an opportunity for automation. Wipro's RepoCHK tool automates the data level validation of Reports before & after re-pointing to Snowflake DB.

Tool schedules the Test scripts, executes all test cases and provided detail summary dashboard of Test Results. Reduces overall testing efforts. Solution is scalable to high number of reports of various technologies.

**Expected benefits :**  
**46% productivity gains in overall Report data validation effort.**

## Snipe

### SNIFE for Reports Reporting

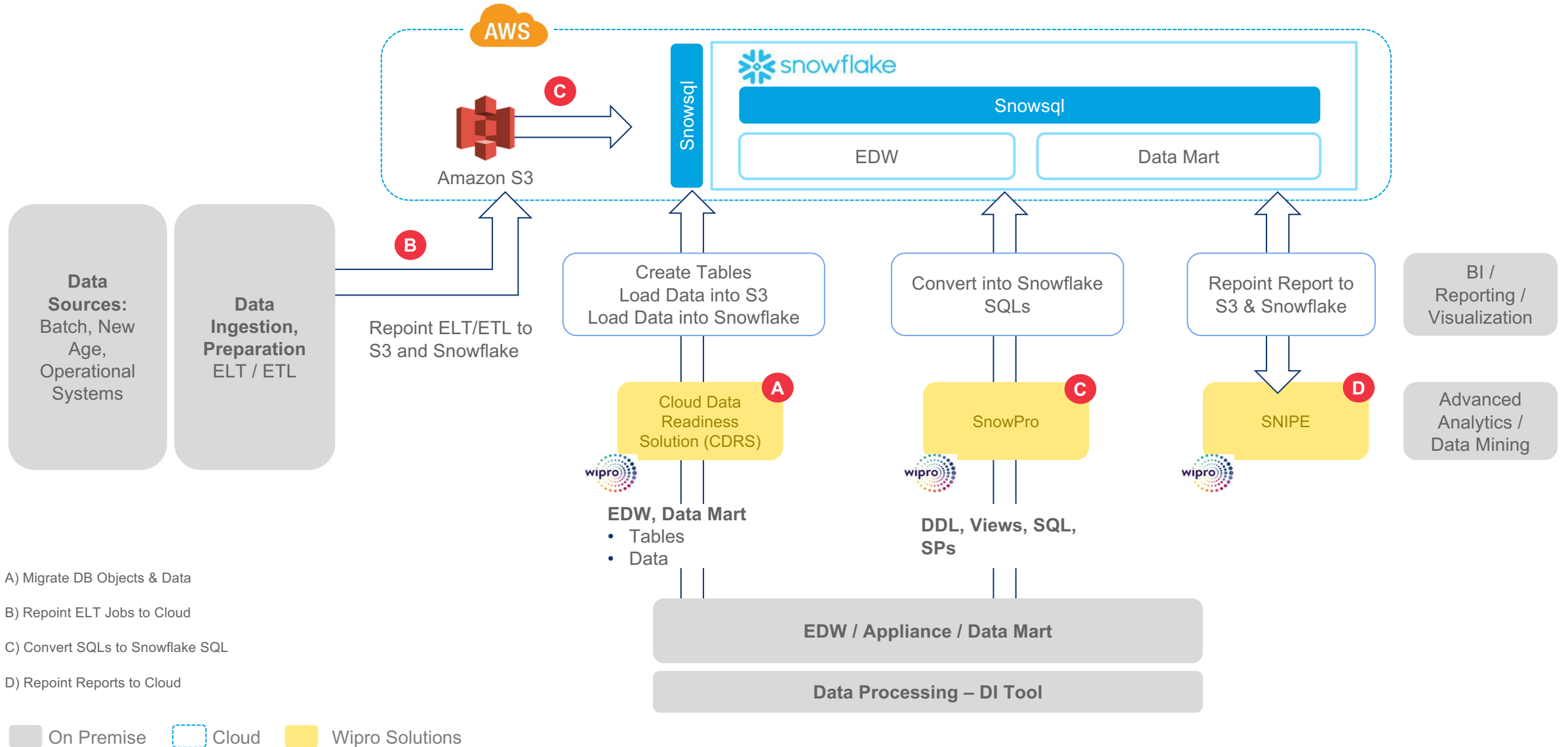
Reads and updates Report metadata and changes the Data Source connection to Snowflake automatically including DB functions. SNIFE helps in automatic DB connection changes & any DB functions changes in Models & Reports. The tool is highly scalable and provides higher efforts savings for large environments.

Rationalize the reports platform, identify unused reports to minimize efforts to re-point reports into Snowflake.

**Expected benefits :**  
**80% efforts savings in Cognos Framework Model Connection changes.**

**50% efforts savings in Tableau Connection changes.**

# Create components migration approach



- A) Migrate DB Objects & Data
- B) Repoint ELT Jobs to Cloud
- C) Convert SQLs to Snowflake SQL
- D) Repoint Reports to Cloud



# Case study: Data migration-Teradata to Snowflake

## Case-In-Point – A Leading Product Retailer in US

### ● Business Challenges & Objective

- Large and frequent capital spend required to maintain performance levels for DWH
- Fragmented DR strategy
- Complicated workload management policies

### ● Wipro Contribution

- Wipro's knowledge of the client data landscape helped with a quicker pilot to implementation.
- Wipro brought migration tools to reduce manual overhead of Teradata to Snowflake migration by over 30%.
- Wipro brought in best practices to build out the new reference architecture, governance and operating model for the new age platform.

### ● Wipro Contribution

- The migration to snowflake allowed the customer to progress on their next gen platform strategy, rather than having to focus on keeping “the lights on” with the legacy DWH
- High performance DWH solution at a fraction of the cost
- Was able to operationalize “Insights as a service” with chargebacks to business units

# Wipro - snowflake partnership

As a part of the cloud modernization initiative, Wipro will work with Snowflake to provide cloud migration consulting and due diligence services.

## ● Team and Training

- 100+ consultants trained on Snowflake.
- 400+ consultants on Snowflake by end 2018

## ● Sample Customers on Snowflake

Large Footwear and Apparel manufacturing company

Large Banking & Financial company in East coast

Large quick serve restaurant

A specialty retailer in west coast



**Fortune 2000 Wipro Engagements on Big Data and Analytics**

## ● Snowflake Centre of Excellence & Wipro Snowflake business group

- Joint implementation model with t architects in Wipro Snowflake Dallas centre of excellence
- Mountain View innovation centre open to showcase solutions and prototype with joint customers

## ● Frameworks and Accelerators

- CDRS Tables & Views – Automation for simple and complex views for DDL generation
- SnowPro for Migration -Manual conversion SQL, SP, Macros are time consuming & complex tasks.

- RepoCHK tool automates the data level validation of Reports before & after re-pointing to Snowflake DB.
- SNIPE for Reports Repointing -Reads and updates Report metadata and changes the Data Source connection to Snowflake automatically including DB functions

# Wipro - Talend partnership

## ● Team and Training

- Top 3 SI partner
- Gold level partnership
- 300+ consultants trained on Talend
- 500+ consultants by end of 2018

## ● Sample Customers

- Large manufacturing client - Implementation of Talend Big Data solution
- Large Pharma and Med Devices client - Cloud MDM solution Reltio - Talend Integration
- Leading Clothing Retailer UK - Enhance store management through centralized DWH and SFDC integration

## ● Frameworks and Accelerators

- **Next Gen DI**
- Pattern\* based Talend development automation. Pre-built patterns to kick-start Big Data, Digital and EDM projects. Rich and extensible pattern library.
- Bulk generation of Talend code. Cut down manual effort of development.
- Improved code quality and reduced coding errors.

\*A pattern is an abstraction of the data flow logic defined independently of the data structure metadata and implementations.

# Wipro - Tableau partnership

## ● Team and Training

- Global SI partner
- Awarded best strategic partner 2017-18
- 500+ consultants trained on Tableau
- 1000+ consultants by end of 2018

## ● Sample Customers

- Leading healthcare and consumer good packaging company: Spend analytics using Tableau in customer's Global travel program
- Leading athletic shoes and apparel company: Cloud migration in Tableau
- Leading clothing and accessories company: Tableau reporting

## ● Frameworks and Accelerators

### SNIPE

- Report rationalization and reduction of inventory of reports
- BI Transformation from Old age tool to tableau

### Bravos

- Accelerator for requirement gathering, development On the Go
- Graph suggestions for the best visualization for the problem