AUT

For those who want Learning Analytics but can’t get started.

AUT

AUT

DW

60 Internal and External source Systems

Cognitive

NINA

Analytics

Learning, People, Student, Service, Benchmarking

Mobile

200 users

TV

Weekly promotion and training episodes

Cloud

Power BI, Cognitive Services, Azure based servers

Self-service

Self-service for most areas in the university

Reportal

The home of all of AUT's BI. Second most visited site

Open i

Students and researchers using our data

Analytics

Student Analytics
Real-time likely conversion score, Diversity and Inclusion, Quality and Quantity of Students, 'Next Big Action'

People Analytics
Workforce Analytics, Diversity and Inclusion, Development, Quality of Hire, Workload and Capacity, Flight Risk Scores

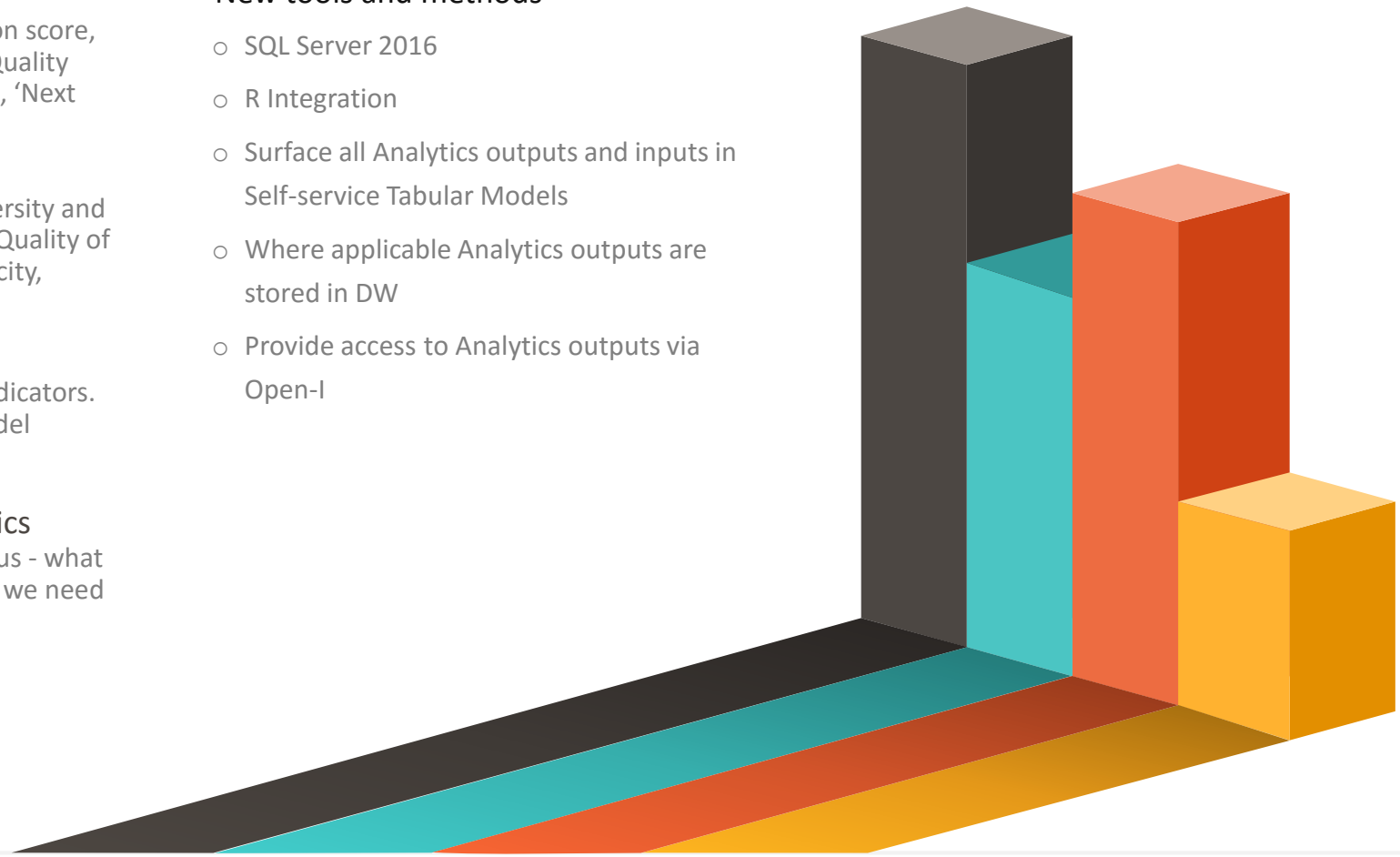
Learning Analytics
Known and Behavioral indicators. Student Success Risk Model

Benchmarking Analytics
Universities who are like us - what are they doing, where do we need focus our attention

Service Analytics
Operational Efficiency

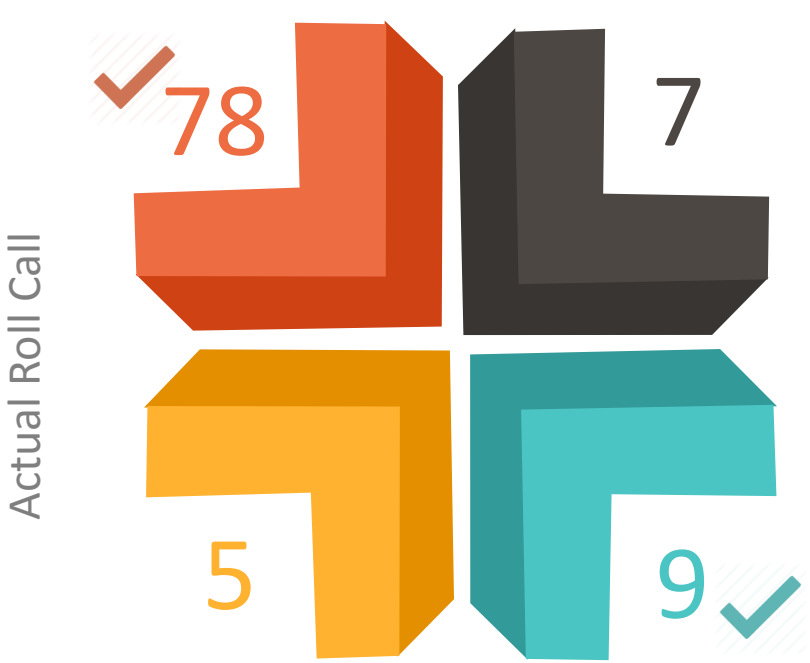
New tools and methods

- SQL Server 2016
- R Integration
- Surface all Analytics outputs and inputs in Self-service Tabular Models
- Where applicable Analytics outputs are stored in DW
- Provide access to Analytics outputs via Open-I

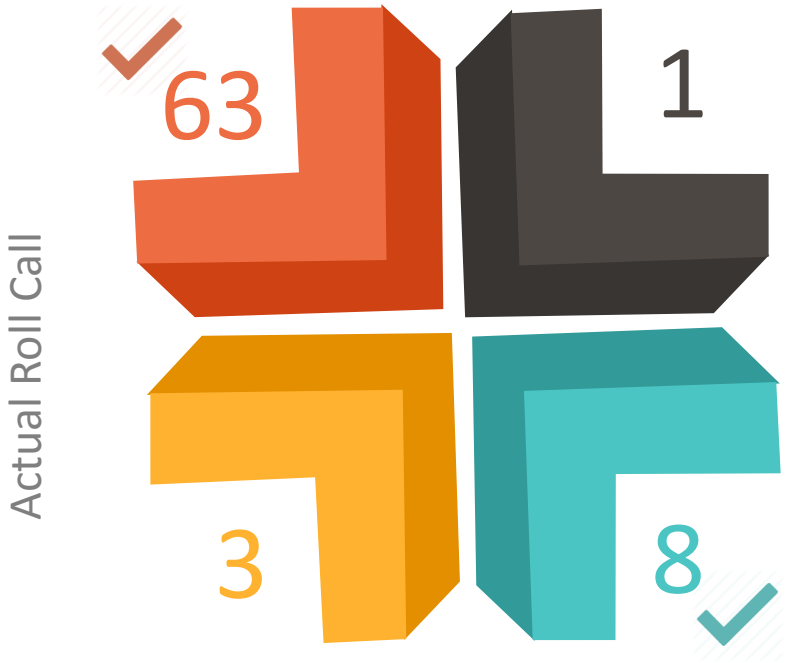


How good is the Digital Footprint?

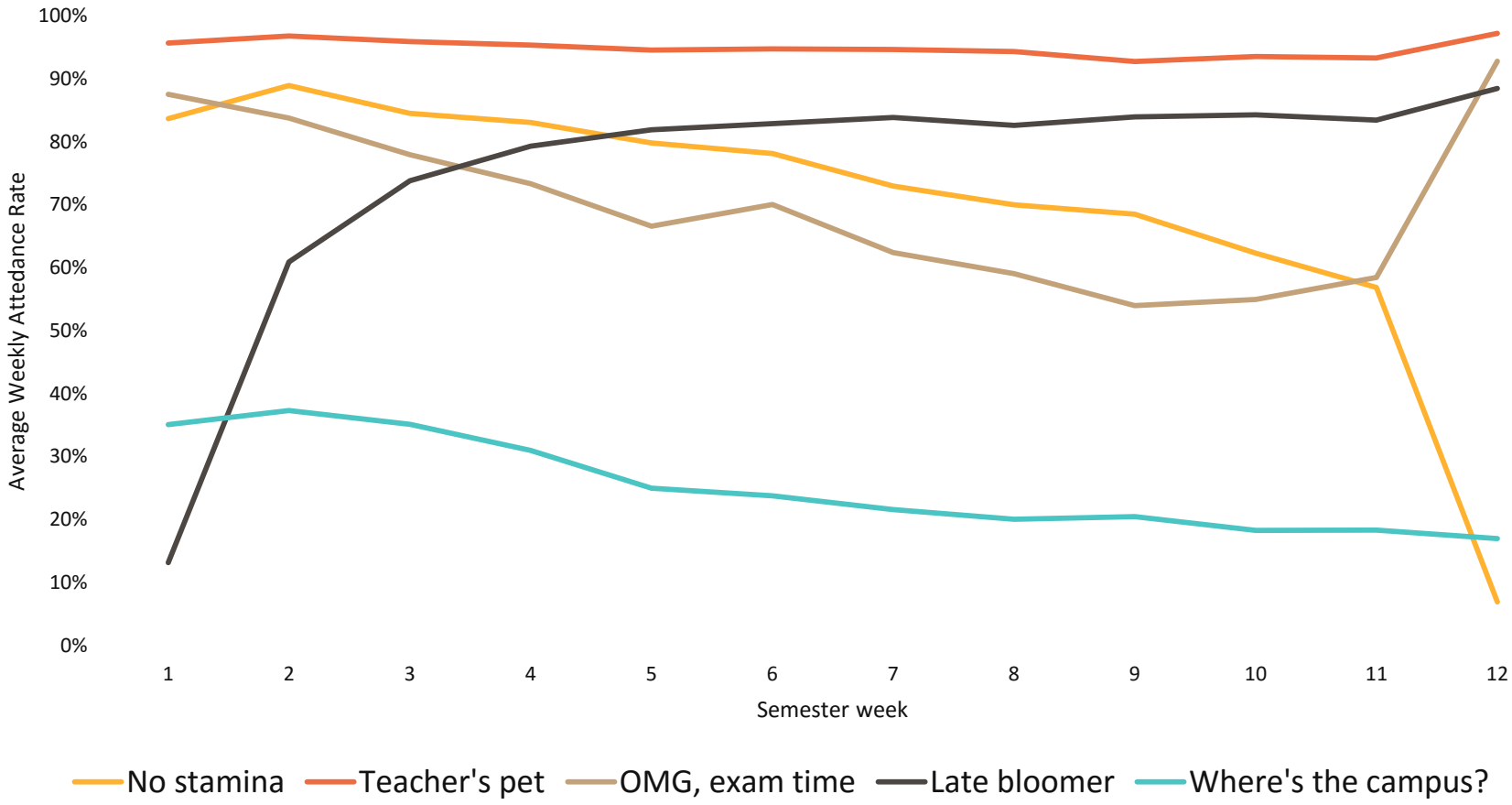
Example A: Accuracy = 88%



Example B: Accuracy = 95%



Cluster: Attendance Rate



Analytics

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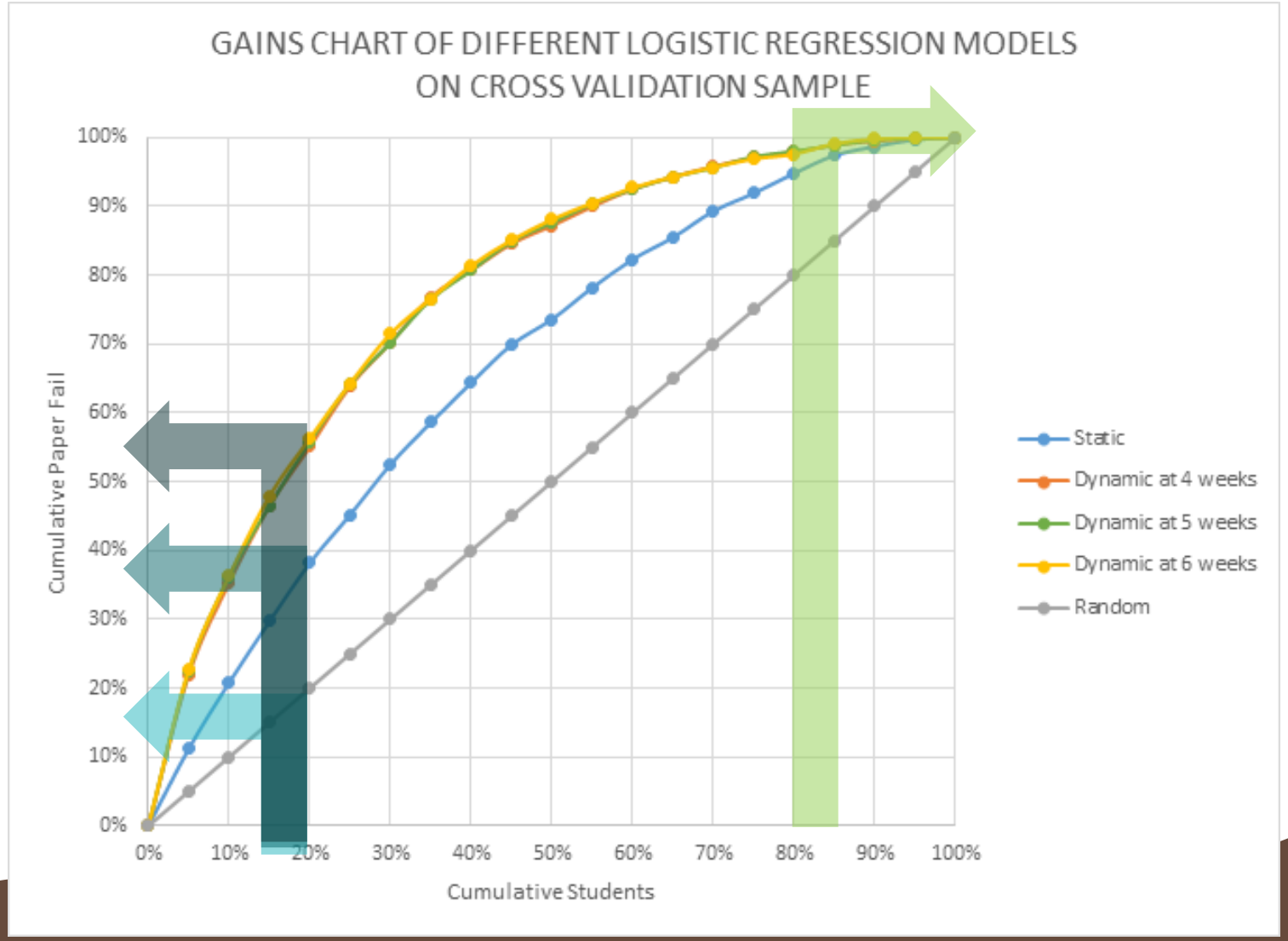
Learning Analytics

The Science


GAINS CHART OF DIFFERENT LOGISTIC REGRESSION MODELS ON CROSS VALIDATION SAMPLE
Cumulative Paper Fail
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Cumulative Students
Static
Dynamic at 4 weeks
Dynamic at 5 weeks
Dynamic at 6 weeks
Random

Analytics

AUT

Learning Analytics - Demo

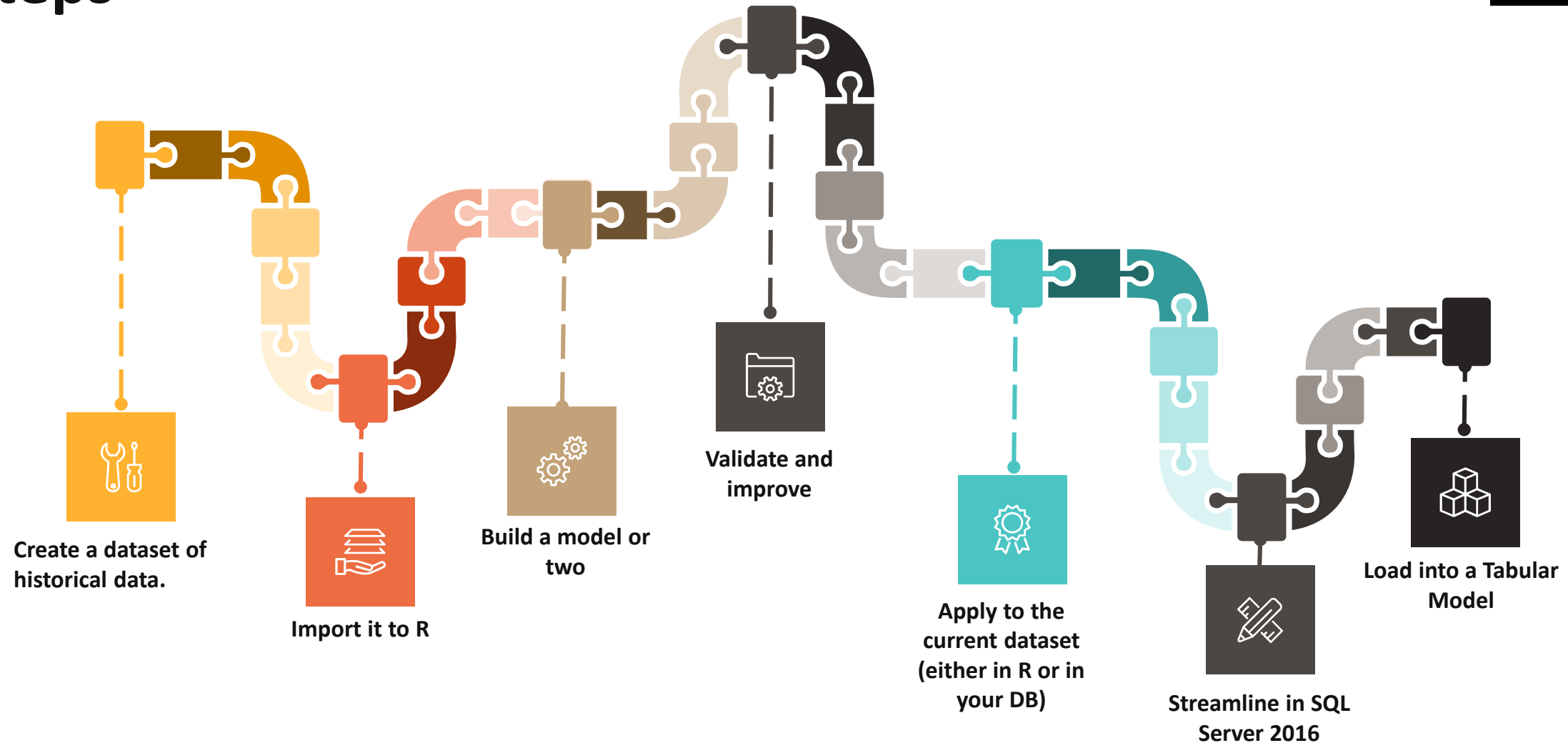
Cognitive
NINA
AUT

Analytics

AUT

Learning Analytics

Steps


Create a dataset of historical data.
Import it to R
Build a model or two
Validate and improve
Apply to the current dataset (either in R or in your DB)
Streamline in SQL Server 2016
Load into a Tabular Model

Building and applying a statistical model

R, a free spirited pirate

Why R?

- Totally free
- Widely used
  Most Stats 101 courses user R
- Very flexible
  Unrestricted by pre-defined functionality

Still scared?

- Lots of users on the internet
  Ask and you shall be answered
- Lots of stats geeks on any campus
  Professors, lecturers, even graduates

How we do stuff

Vision

Vision not a Roadmap
Little Governance
Leading Edge
Early adopters
Avoid being too risk-adverse
We want all the data
Maximise usage

Strategy

Disruptive Competition
Pet Projects
Easy wins first
React to the business
Don't 'log a job'
Use what's free
It's not just about reports
Find experts
Innovation Time

Documentation

No MS Word
White boarding
Prototype
Data Dictionary/MDS
Self-documenting tools
TFS & Daily Standup
Exception Reporting
BI on BI
WIP Wiki

Speed

To get the deal
Extreme Agile
No Project Managers
Release 2-3 Weeks
BI on a separate development path
Templates
QA done by SME

Selling + Sponsorship

VC and SLT
We are everywhere
'Powered by the Data Warehouse'
Reportal TV
Regular Stories
Pretty outputs
Paid Work

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