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DESIGNING AND BUILDING DATA SCIENCE SOLUTIONS

ABOUT US

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Pivigo

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DIGITAL TRANSFORMATION

WHY AI IS SO IMPACTFUL

- Increase operational efficiency
- Improve quality of services
- Understand customers better

Since 2000
52% of the Fortune 500 companies
have disappeared

SMEs

99% of companies

>50% GDP

53% adopting digital transformations

87%

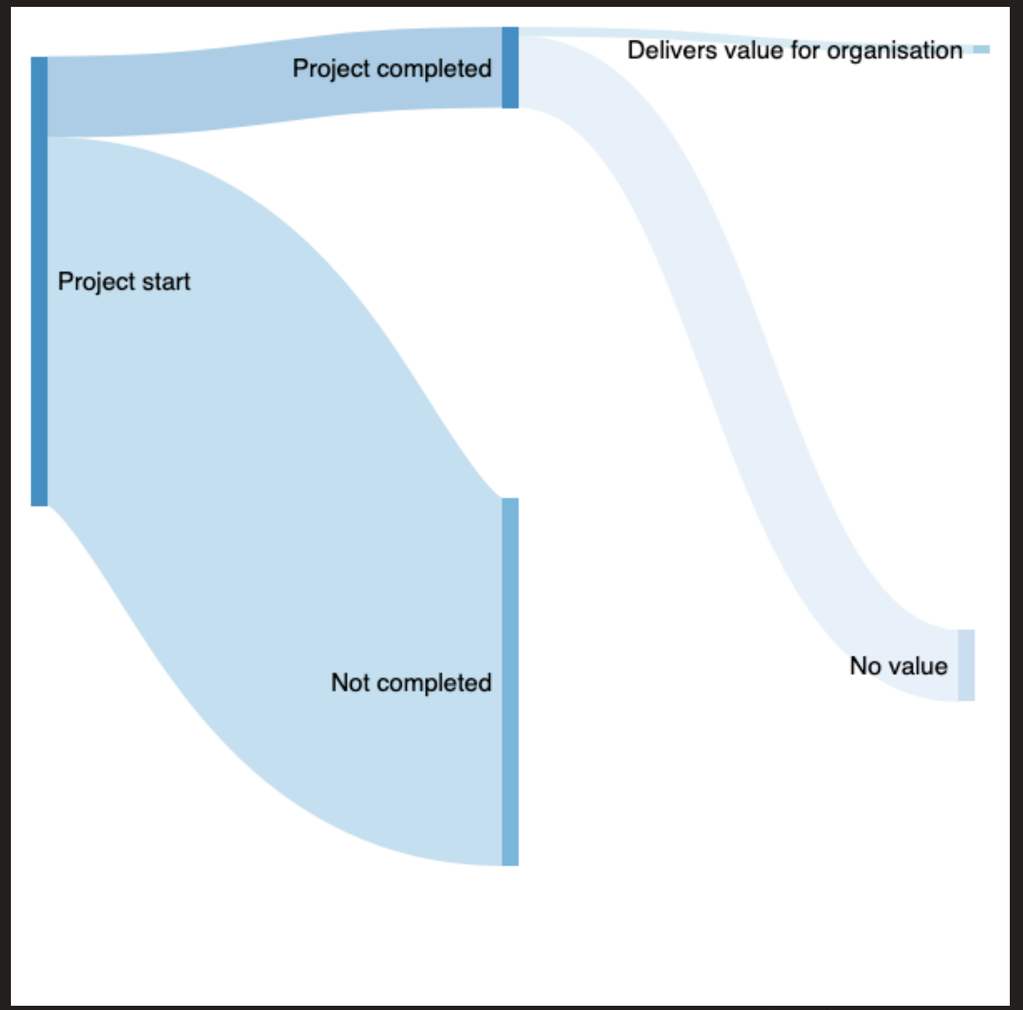
of data science projects never make it into production

8%

of completed projects generate value

2%

success rate



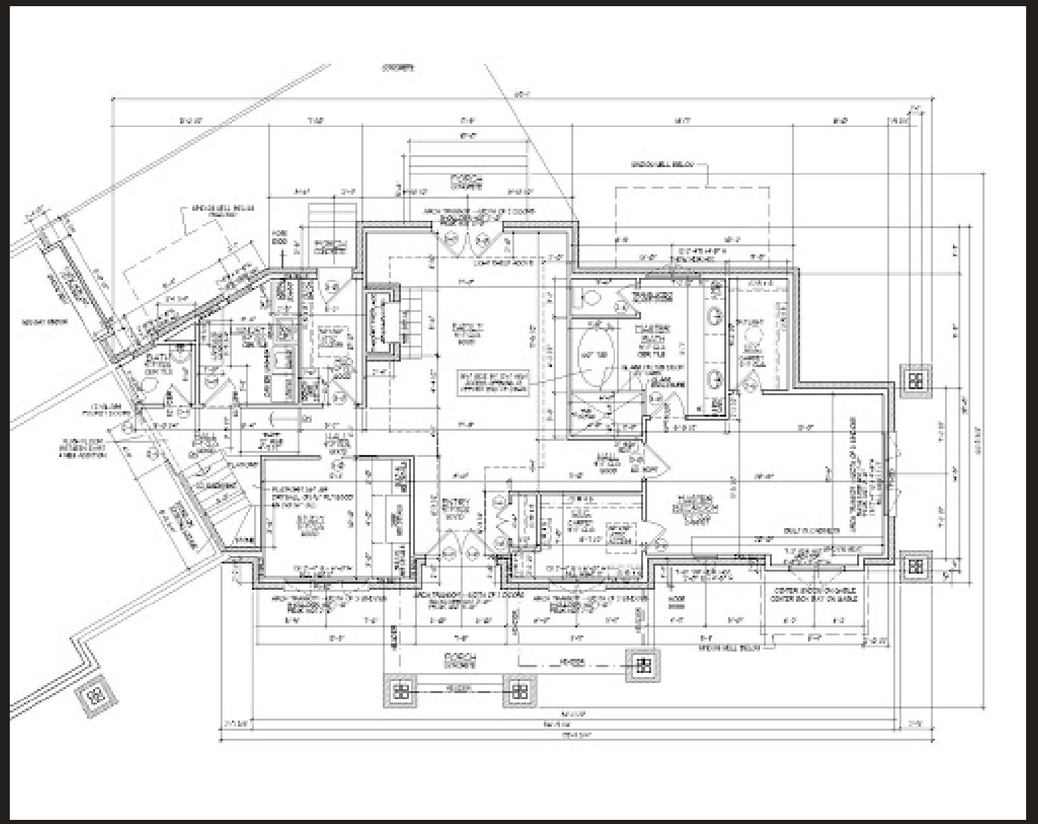
fastdatascience.com

WHY?

- *Harder than expected*
- *Leadership/ownership issues*
- *Insufficient organisational alignment*

https://hbr.org/2016/08/the-reason-so-many-analytics-efforts-fall-short
https://pubsonline.informs.org/do/10.1287/orms.2019.06.08/full/

DESIGN

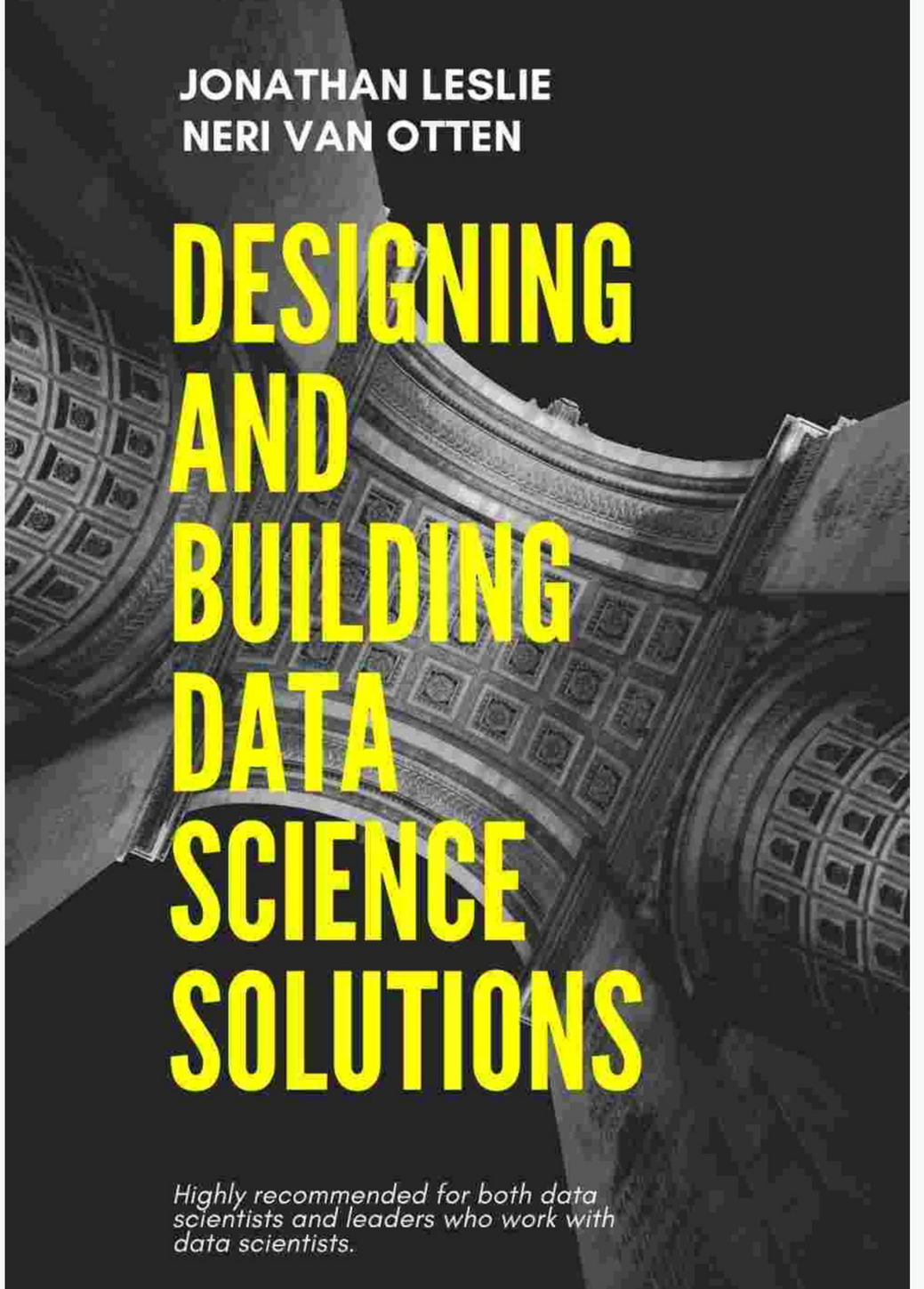


DESIGNING AND BUILDING DATA SCIENCE PROJECTS IS REALLY HARD

EXPERIENCE MATTERS

Our book was written to share our knowledge.
Free to read at datasciencedesign.com or available on amazon.

https://datasciencedesign.com

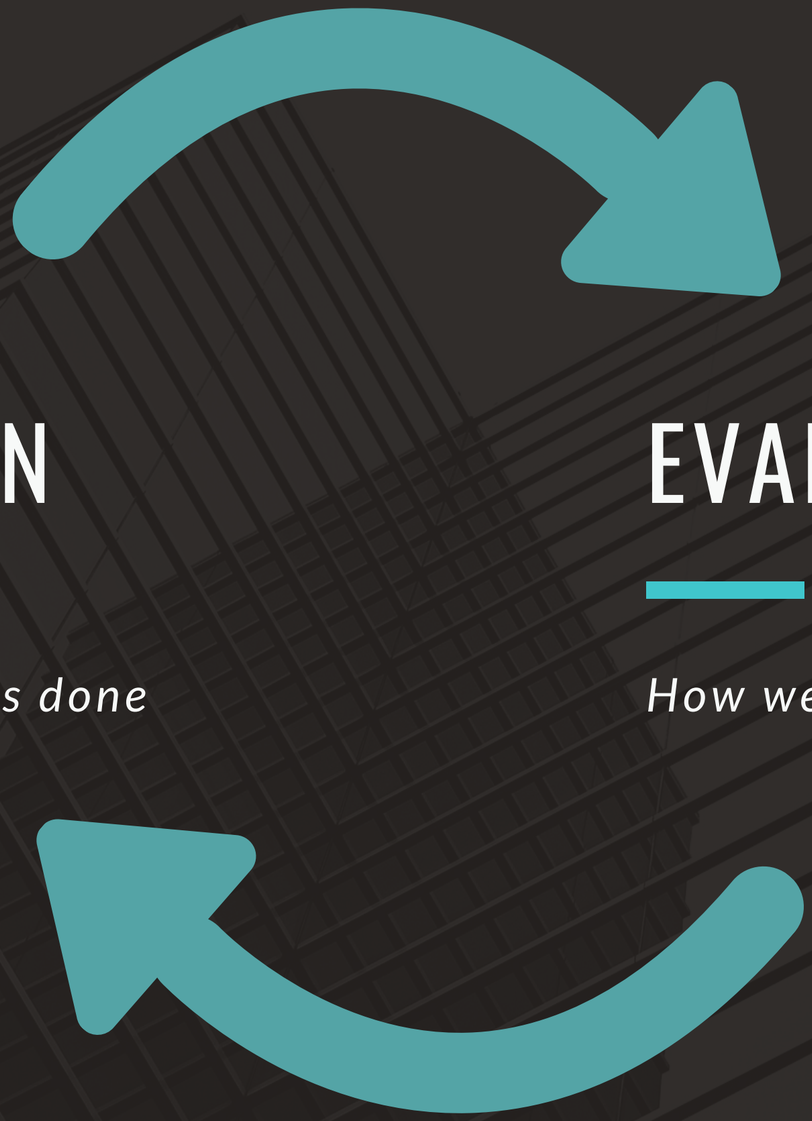


EXECUTION

How the project is done

EVALUATION

How we assess success



EXECUTION

How the project is done

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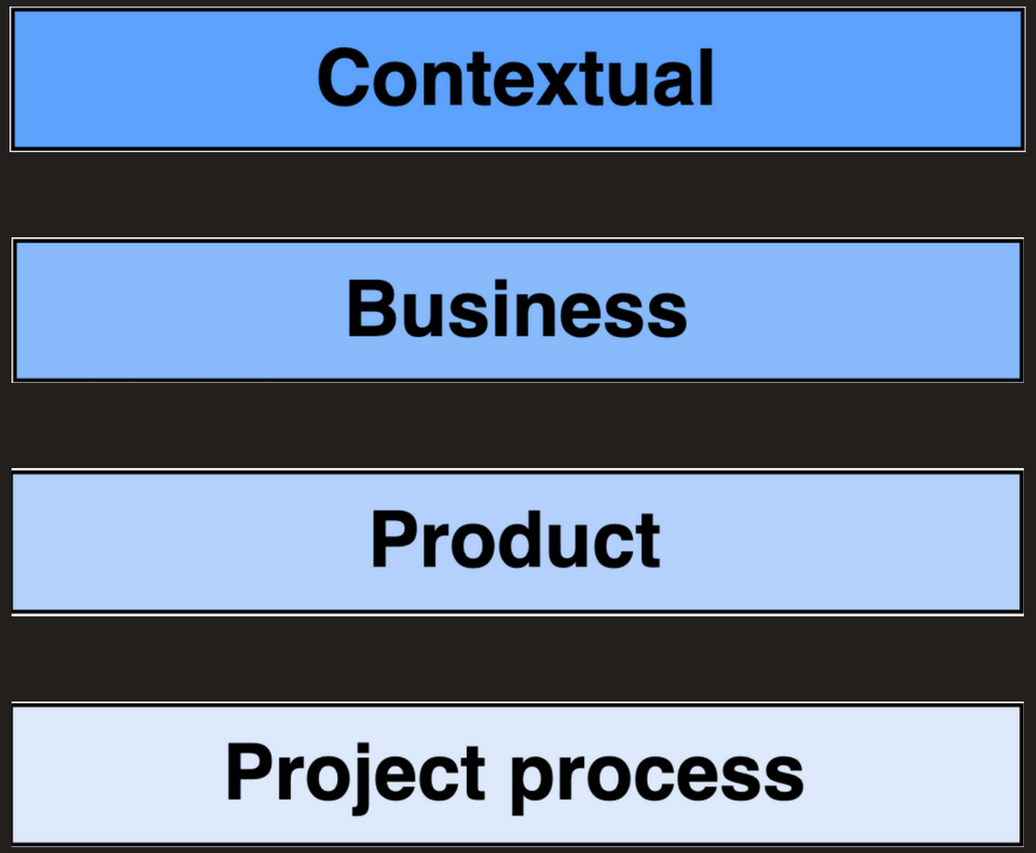
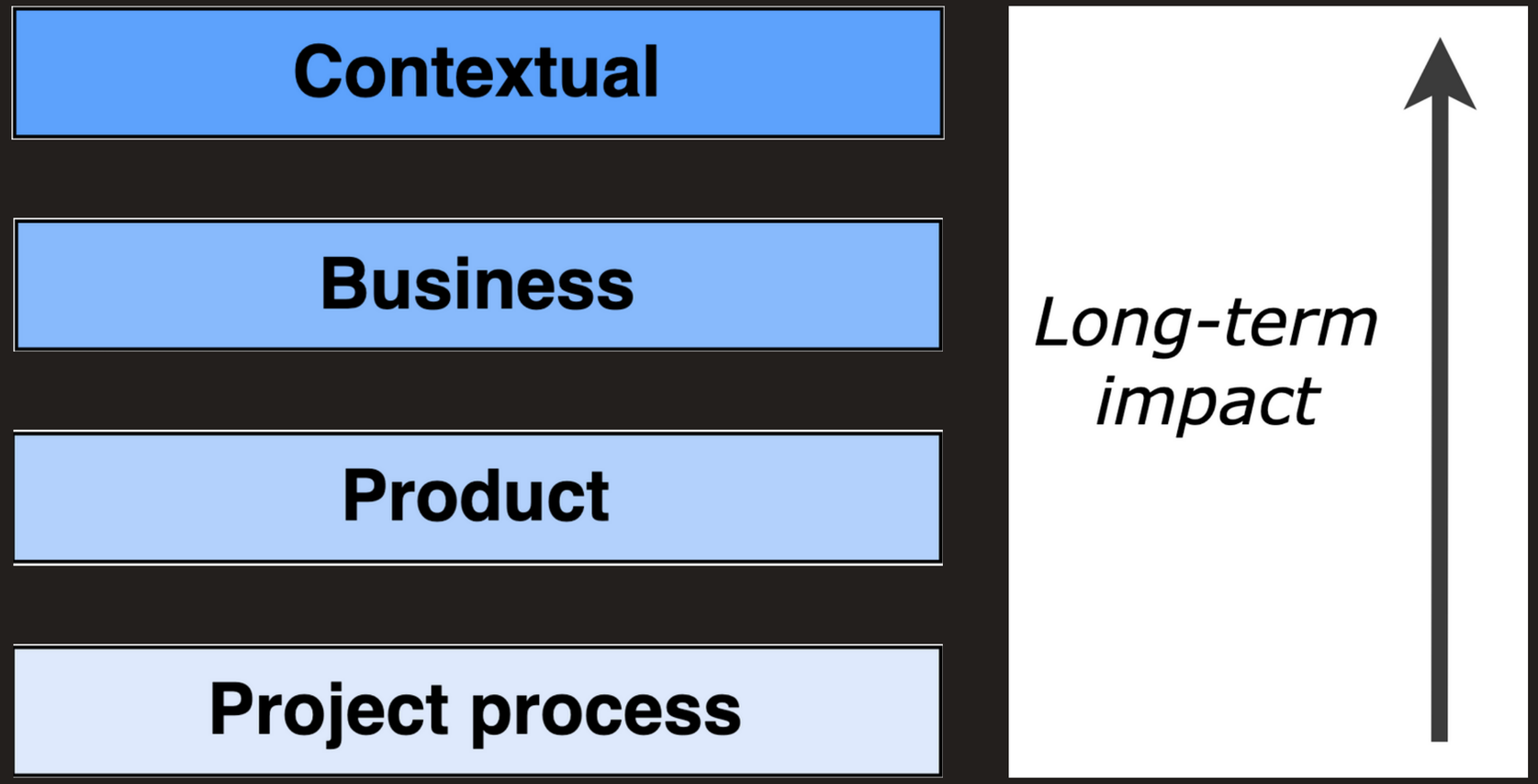
PROJECT EVALUATION



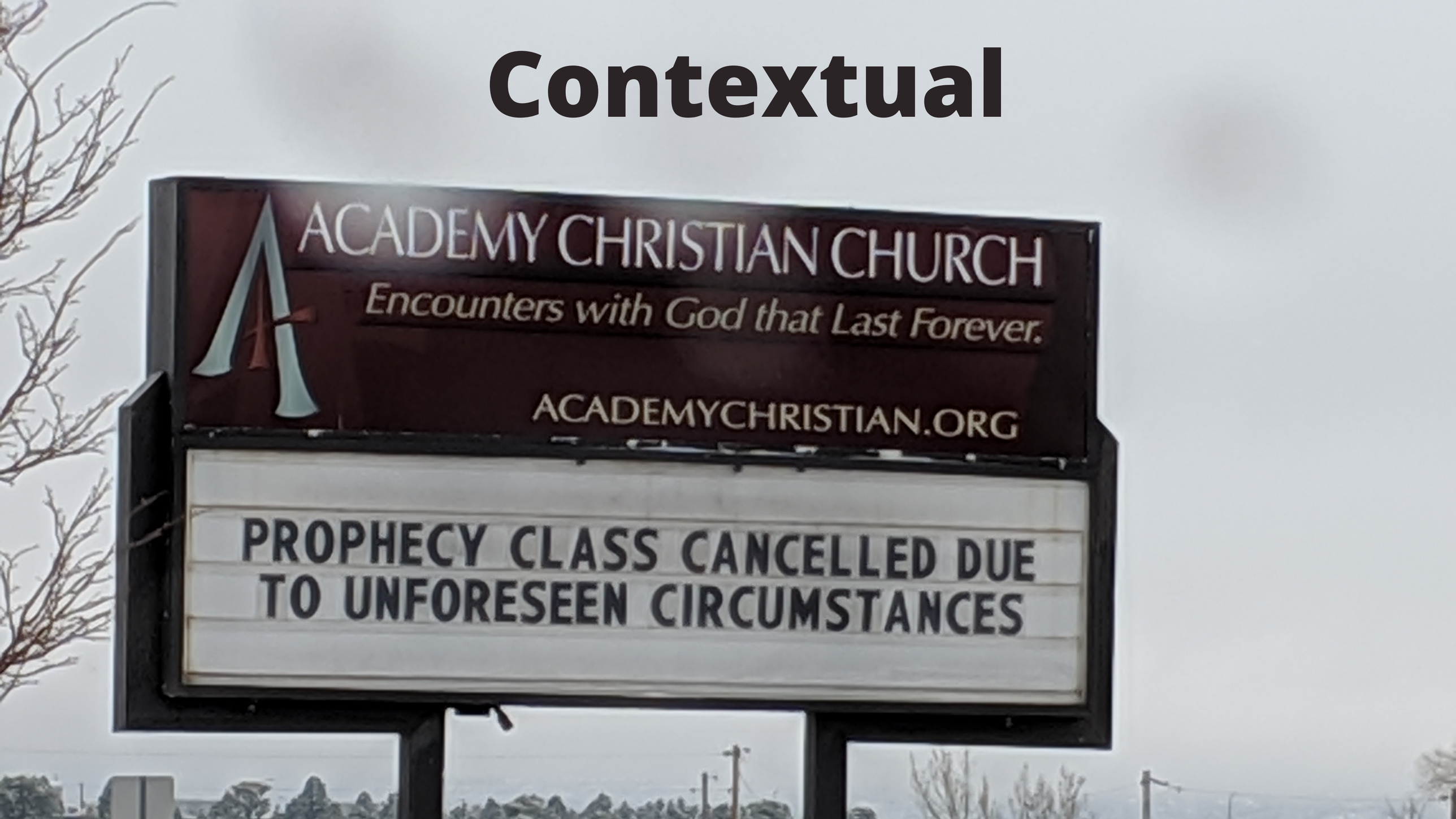
Howsawi, et al (2014); https://doi.org/10.5130/.v1i0.3865

PROJECT EVALUATION



Howsawi, et al (2014); https://doi.org/10.5130/.v1i0.3865

Contextual


ACADEMY CHRISTIAN CHURCH
Encounters with God that Last Forever.
ACADEMYCHRISTIAN.ORG
PROPHECY CLASS CANCELLED DUE
TO UNFORESEEN CIRCUMSTANCES

Contextual

The circumstances surrounding a project and the externalities that affect it

Focus on strategy

Strategic imperatives

Challenges in delivering strategy

Missed opportunities

Business

Business

How much value the project brings to the business

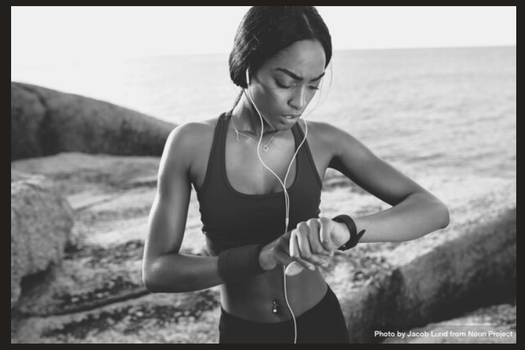
Can be difficult to measure

Concrete metrics

Increased revenue

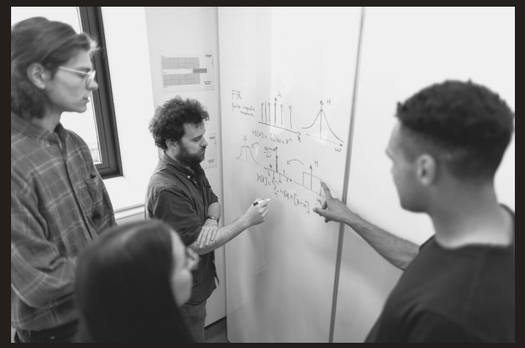
Time saved

Measured customer satisfaction



Defined KPIs

Assess project's impact in isolation



Less tangible outcomes

Insights generated

Adoption of "data-driven" approach

Understanding of data landscape

Product

Product

Deliverables and technical specification

Focus on quality

Model accuracy

Precision

Recall

F1

Product performance

Accuracy

Interpretability

Speed

Code quality

Efficiency

Documentation

Scalability

Project process

Project process

Actions taken towards
producing deliverables

"Scientific chops"

Delivery

On-schedule

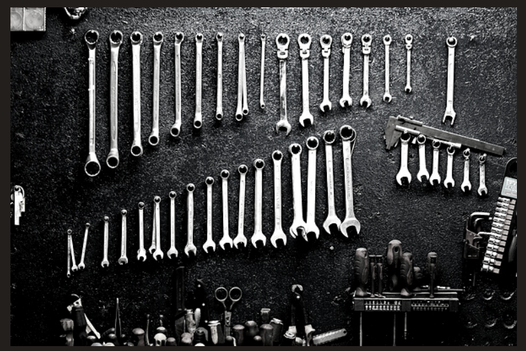
Within-budget

Scientific rigour

Exploratory data analysis

Model selection

Statistical analysis

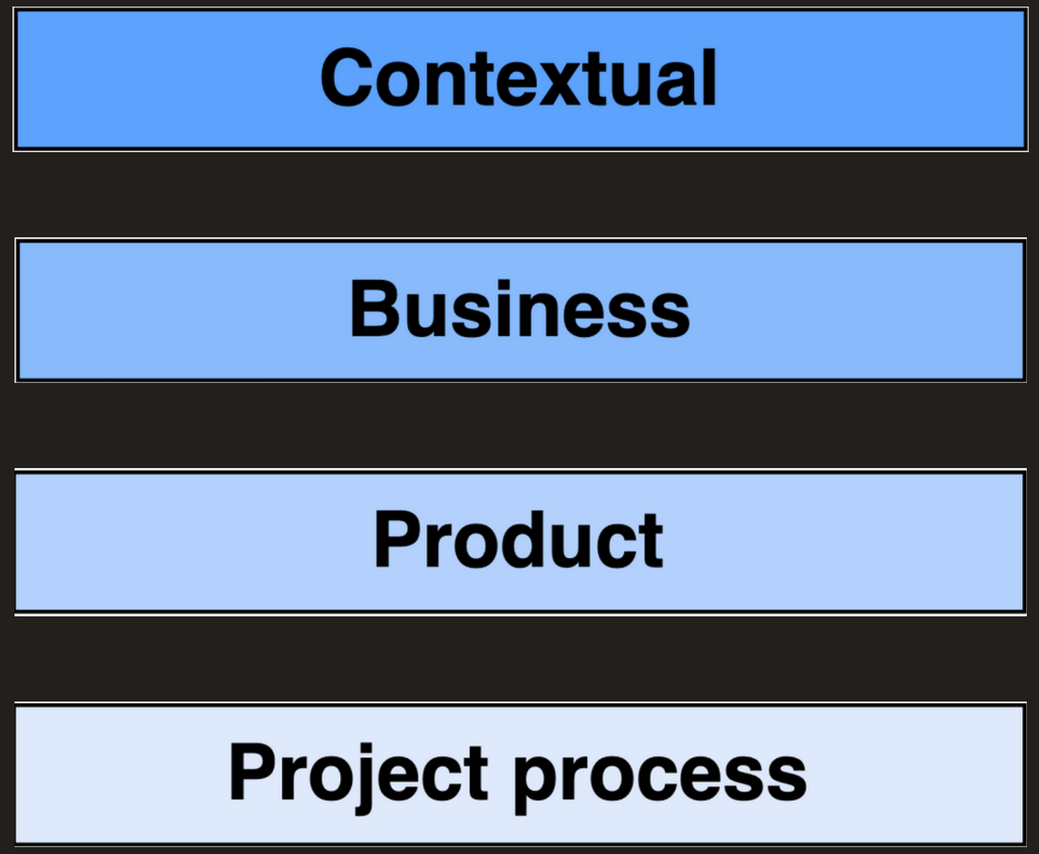


Knowledge of tools

Methodologies

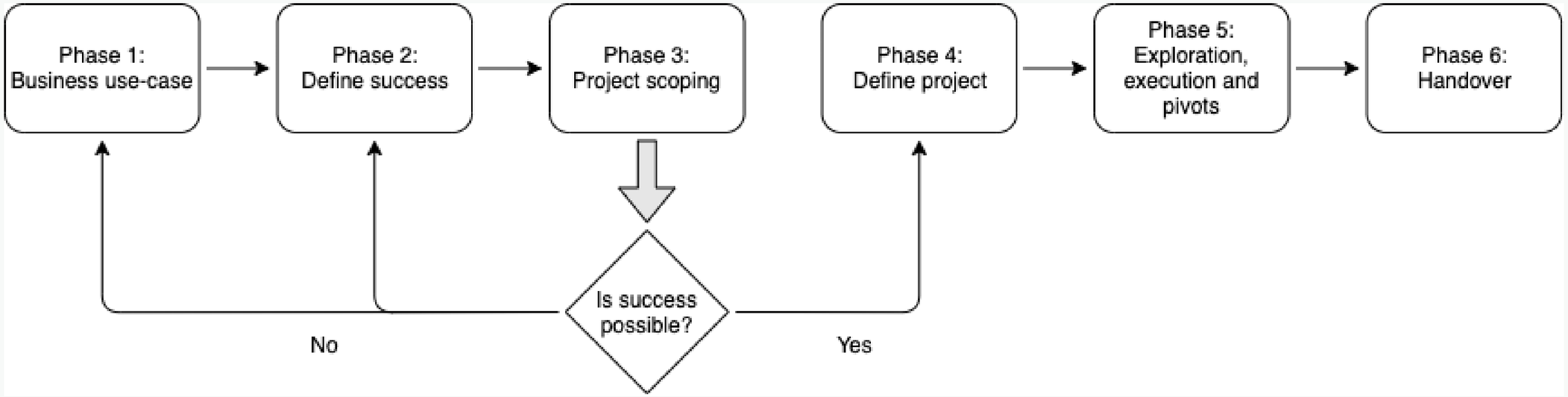
Coding proficiency

PROJECT EVALUATION



SIX PHASES OF A PROJECT

OUR FRAMEWORK



The Business Case

IS THERE ALREADY A CLEAR BUSSINESS CASE?

If not it's time to brainstorm and consider your possibilities.

DEFINE THE QUESTION AND FORMULATE A HYPOTHESIS

It is important that all parties agree on the project’s scope and goals

ARE THERE CONCRETE OBJECTIVES?

Often innovation is an objective but this isn't a concrete enough business case.

INFORM THE STAKEHOLDERS

Make sure everyone is informed as to what the end result of the project will look like and how this will meet the business objectives.

DEFINE SUCCESS

How will we measure success?

- Who will be involved?
- What will be included?
- How will the end product be used?

Key Performance Indicators (KPI)

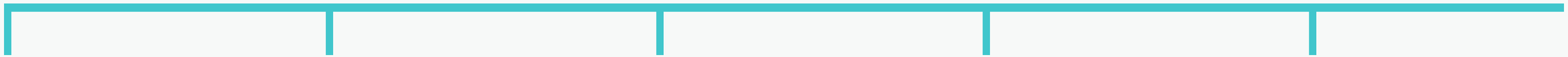
- Is your objective **Specific**?
- Can you **Measure** progress towards that goal?
- Is the goal realistically **Attainable**?
- How **Relevant** is the goal for your organization?
- What is the **Time-frame** for achieving this goal?

Feasibility Studies

Objectively and rationally uncover the strengths and weaknesses of a project to assess the likelihood of success.

SCOPING

QUICKLY ACCESSING HOW FEASIBLE A PROJECT IS



Getting access to data

Data cleaning

Hypothesis testing

How can we reduce risk?

Is success possible?

Project Definition

Develop a project plan

Stages, aims and milestones

Be specific

Skills and budgeting

Expertise required

Over/under budgeting dilema

Manage the project and evaluate the project plan

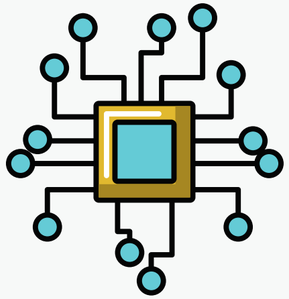
Put project management tools and practices in place

Look back ath the 4 levels of evaluation

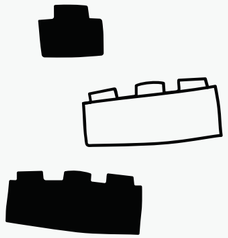
EXPLORATION, EXECUTION, PIVOT

DOING THE WORK

Research



Prototyping



Build, assess, rinse, repeat

Evaluate

Go to client

HANDOVER

Set the project up for long term success!

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THANK YOU!