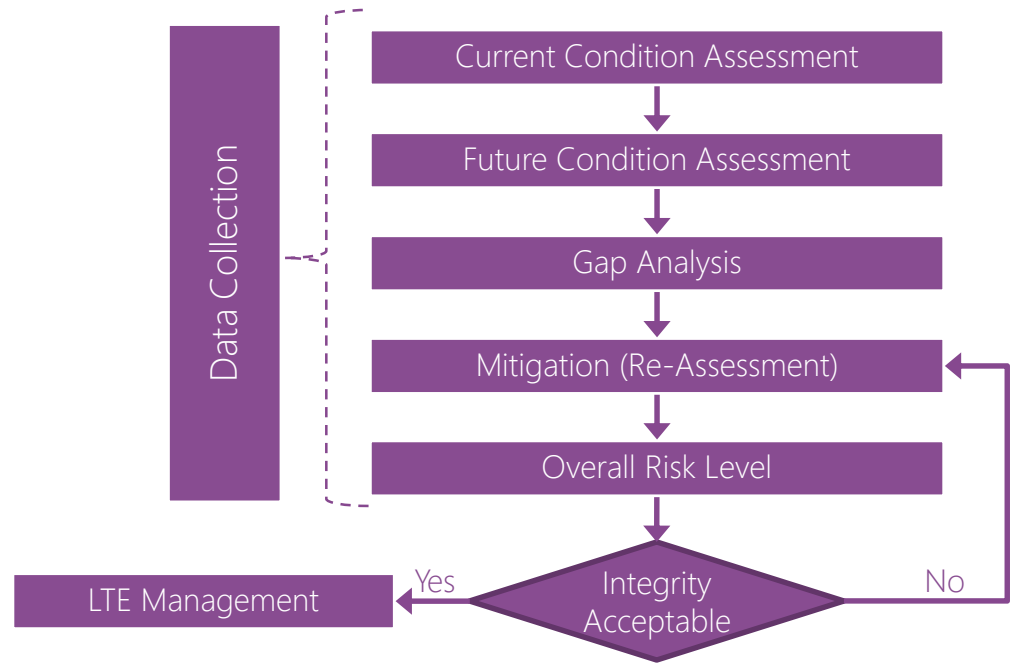


Data availability and quality challenges when executing pipeline lifetime extension studies

Ptil Webinar – 22.09.20
Pipeline Lifetime extension

LTE Process and Data Collection

Data collection goes on throughout the whole LTE process although more heavily weighted at the start of the process.



Data Collection Types

Data collection is not just asset specific data

Asset Specific Data

- Design data
- Operating data
- Monitoring
- Inspection data
- Procedures
- Historical and future production profile
- Modifications
- Events / failures

Other Assets Data / Experience

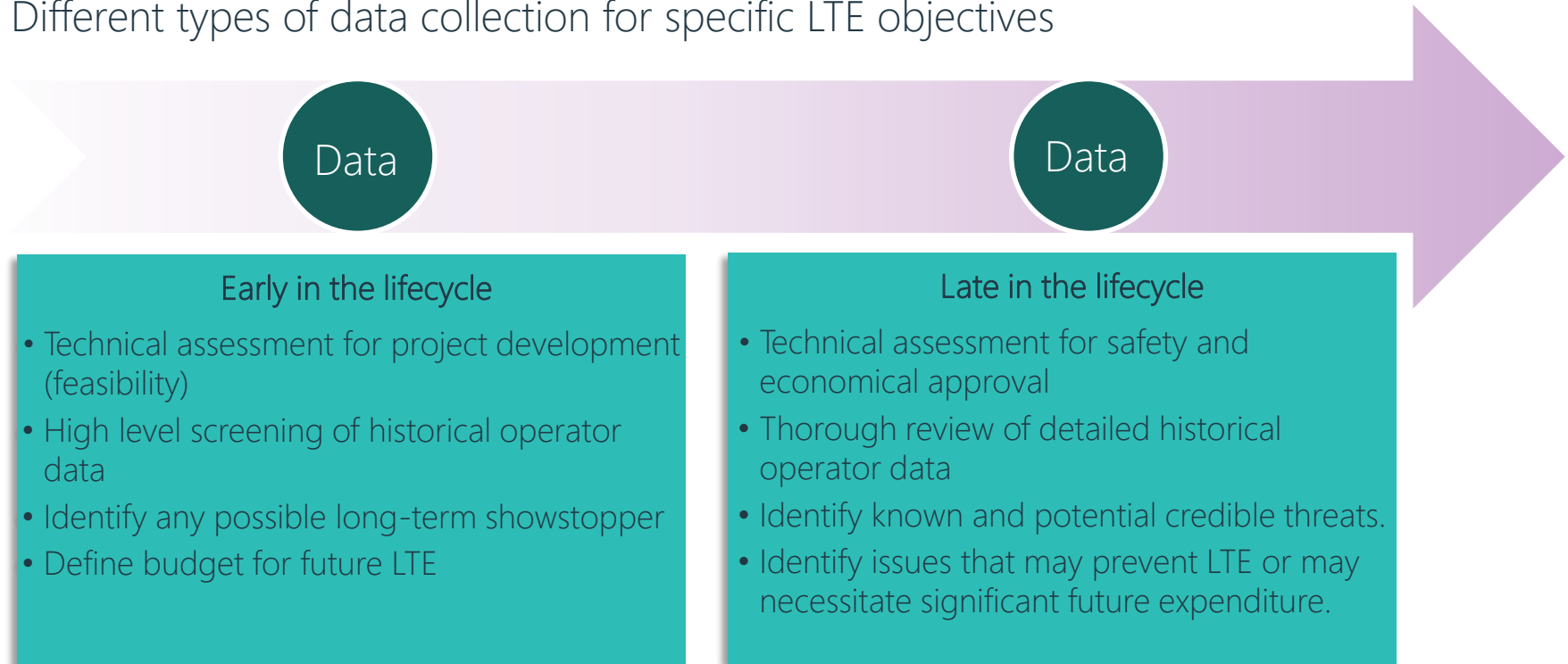
- Similar data from Operator other assets
- Similar data / experience from asset partners
- Sharing forum between Operators, with lessons learned of managing ageing assets

Failure Mode Statistic Database

- PSA Corrosion & Damage (CODAM)
- PARLOC (UK EI)
- OREDA JIP
- Sureflex JIP

Data Collection Types

Different types of data collection for specific LTE objectives



Lack of Available Data

How can data be not available?

Data acquired but lost during operating lifecycle

- Change of operatorship and incomplete handover of data (main risk)
- Deficient transfer from project to operational team
- Change of IT system
- Confidential data not known of everyone
- Data not properly recorded or documented

Data not acquired since the start of operating lifecycle

- Design data required now but not at design period
- Data difficult to record / not recordable
- Monitoring or data acquisitions were not planned during asset design
- No monitoring for unprecedented failure mode
- Monitoring only initiated after a failure occurred



Lack of Data Quality

How can data be deficient of quality?

DFI data quality issues

- Lack of detailed knowledge from design
- Changes not properly documented in project delivery
- Inconsistent design data

Operational data quality issues

- Inconsistent data from different inspections / testing over the years
- Unrepresentative data
- Poorly recorded data
- Incomplete data
- Future data uncertainty

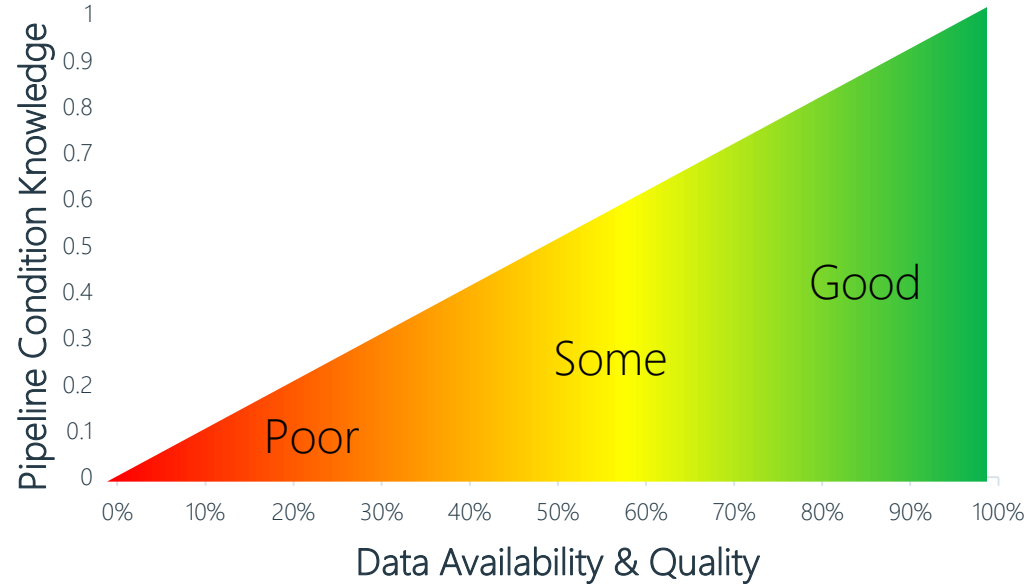


Consequence of Lack of Data

Lack of data quality and availability may prevent the approval of the LTE project

- Lack of confidence in condition assessment due to assumptions used
- Higher project cost
- Not possible to run detailed analysis
- Potential LTE showstopper

➔ Lifetime Extension is not feasible

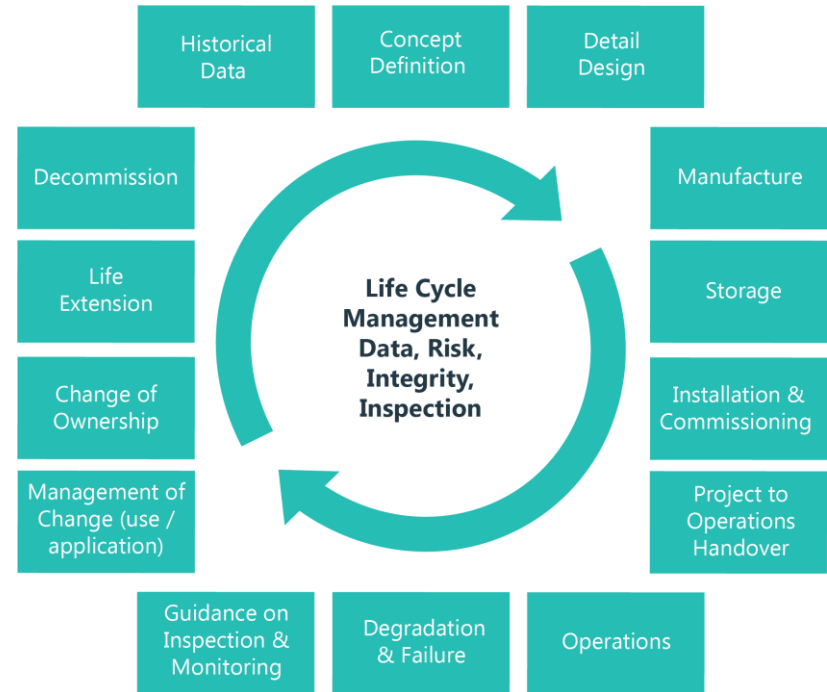


Key data collection strategy

How to ensure a successful data collection **before** LTE study?

- Data collection for LTE starts in the design phase of the asset
- Integrity Management Strategy (IMS) in place from start-up including
- Data Management Plan (data collection and preservation) to ensure through-life data management

➔ Use the latest available technology

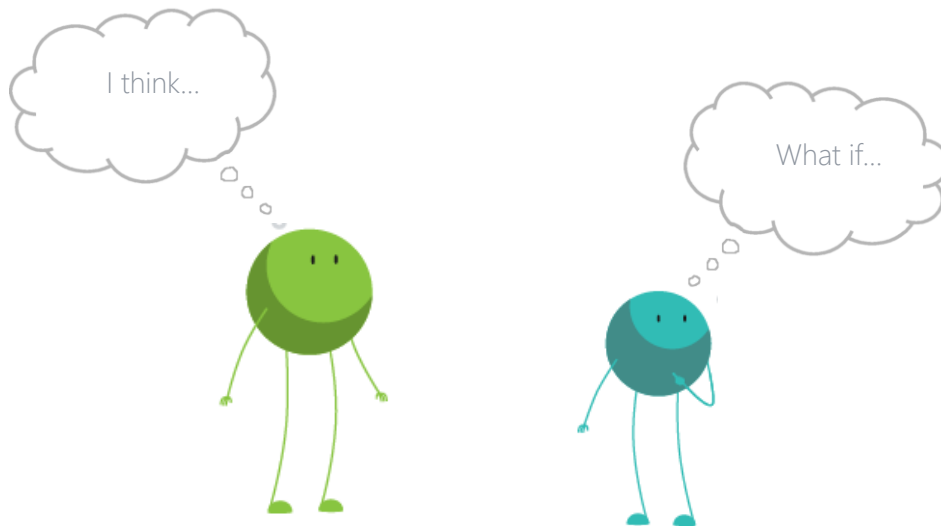


Key data collection strategy *(continued)*

How to ensure a successful data collection **during LTE study?**

- Understand the objectives of the study
- Mobilise technical experts for each system (at Operator and/or Contractor)
- Get input from all experts to generate comprehensive data registry
- Get dedicated data responsible for the LTE study to provide all requested data
- Allocate sufficient budget and time for data collection before starting the condition assessment to avoid re-works

Thoughts, comments or questions?



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