Asset Management of Transportation Systems (Bridges)

November 9, 2018

Performance Management

Performance Management of the Federal Highway Program is a **systematic approach** to **making investment and strategic decisions** using information about the condition and performance of the system and developing an approach **to achieve a desired set of national goals.**

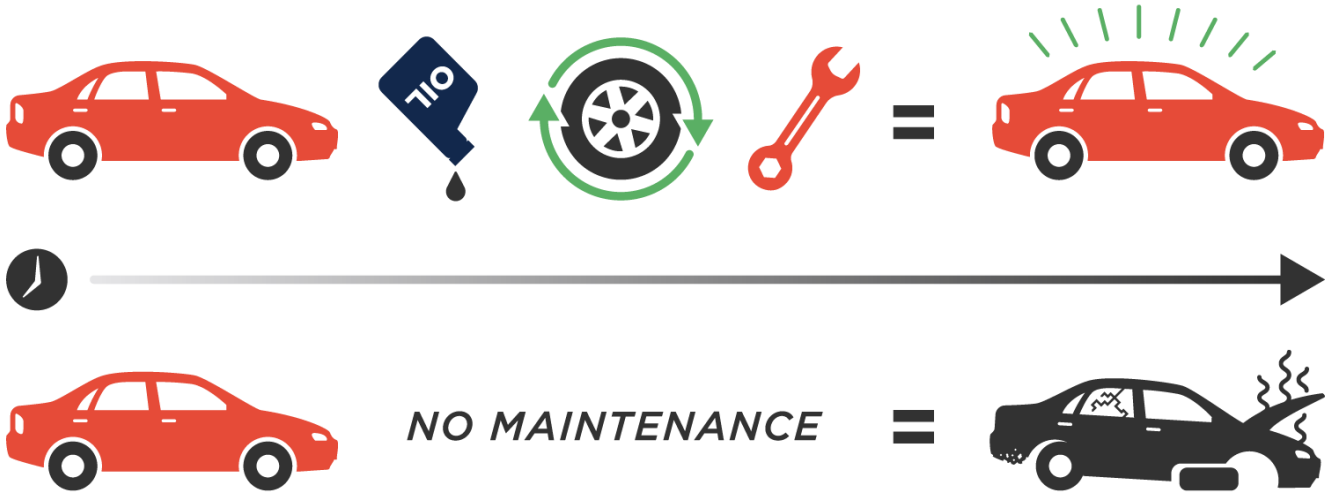
Asset Management

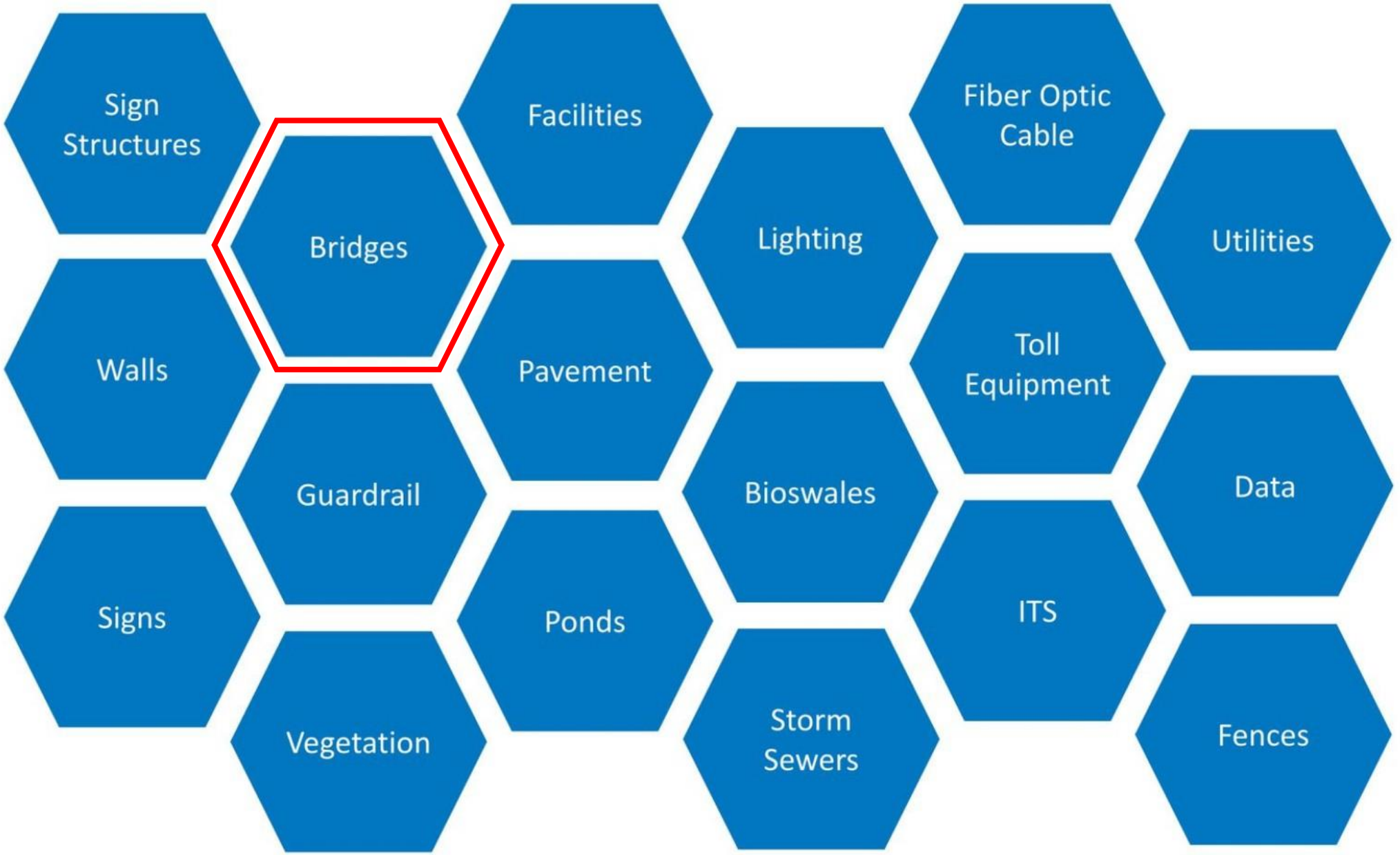
Asset management is **a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis** based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a **desired state of good repair** over the lifecycle of the assets at minimum practicable cost. (23 U.S.C. 101(a)(2), MAP-21 § 1103)

Why Asset Management?

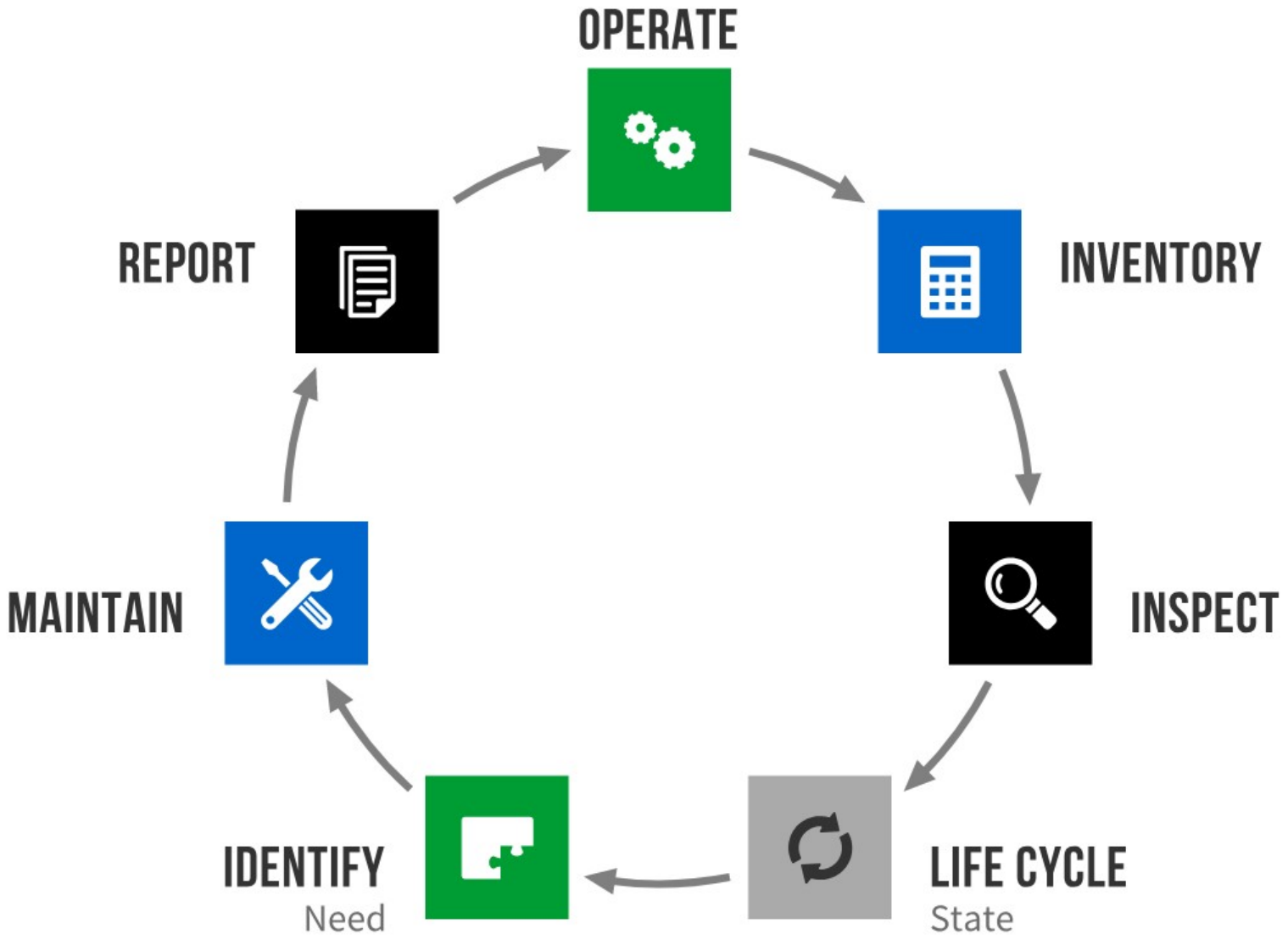
- Lack of recourses to maintain the existing system at the desired level of performance.
- Ensure future investments are strategic and emphasize quality of life and economic growth.
- Create a culture through training and communication where transportation asset management is a way of doing business.

Small, planned investments in maintenance saves money in long run



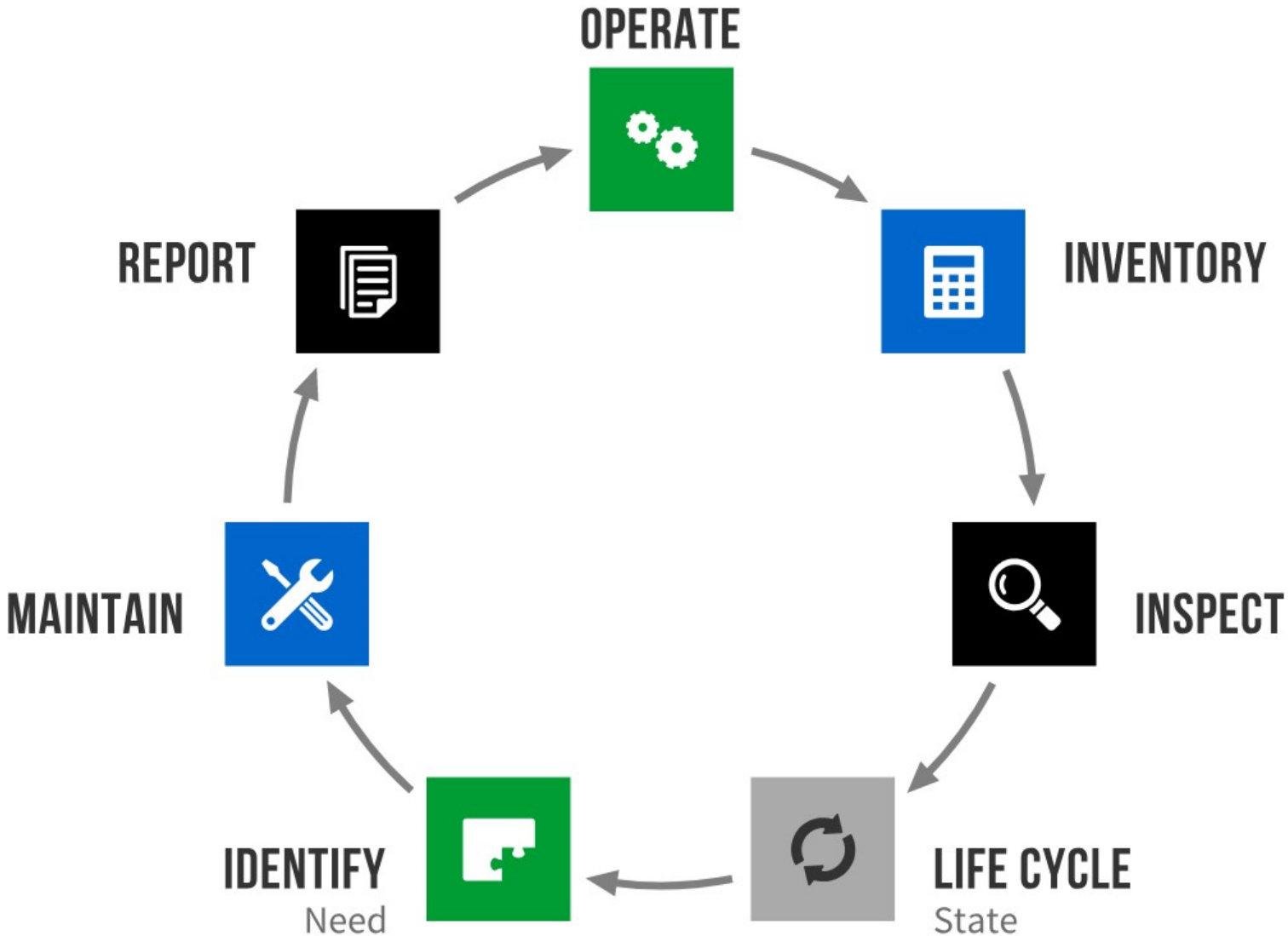

Sign Structures
Facilities
Fiber Optic Cable
Bridges
Lighting
Utilities
Walls
Pavement
Toll Equipment
Guardrail
Bioswales
Data
Signs
Ponds
ITS
Vegetation
Storm Sewers
Fences

Proactive Preservation



INVENTORY

- Use of a Asset Management Software to manage inventory.
- Inventory reflect changes in the system periodically.
- Inventory reflect the different type of ownership.
- Digest the structure into quantities.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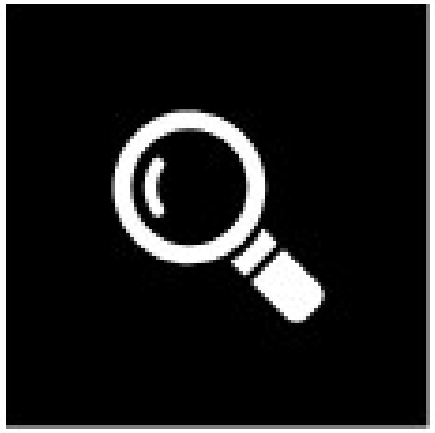
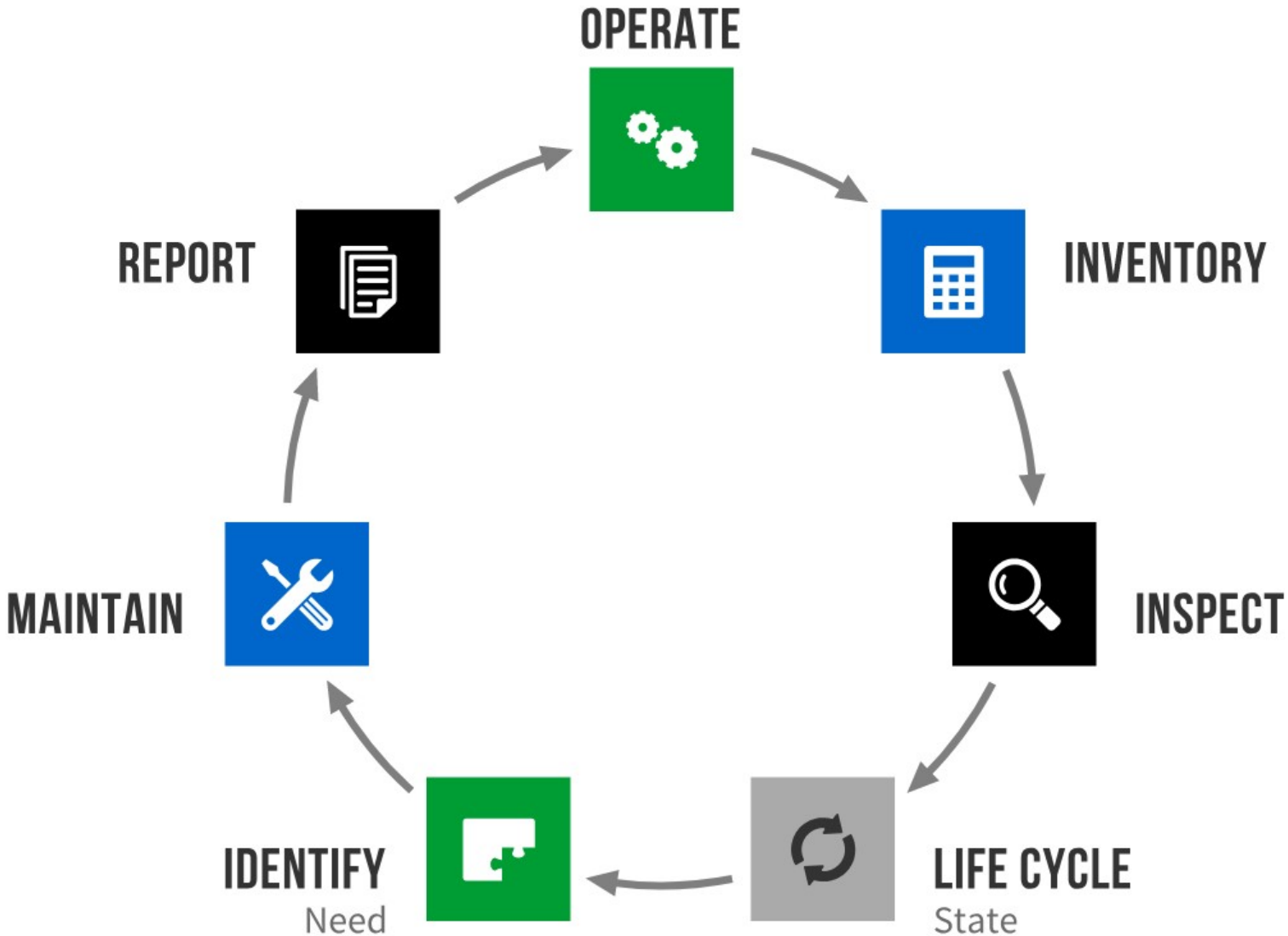
MAINTAIN
REPORT



INSPECT

- Inspection Program is critical to feed the state of the Bridges.
- There is two types of inspection:
  - Condition based rating Inspection system.
  - Quantity based Inspection system.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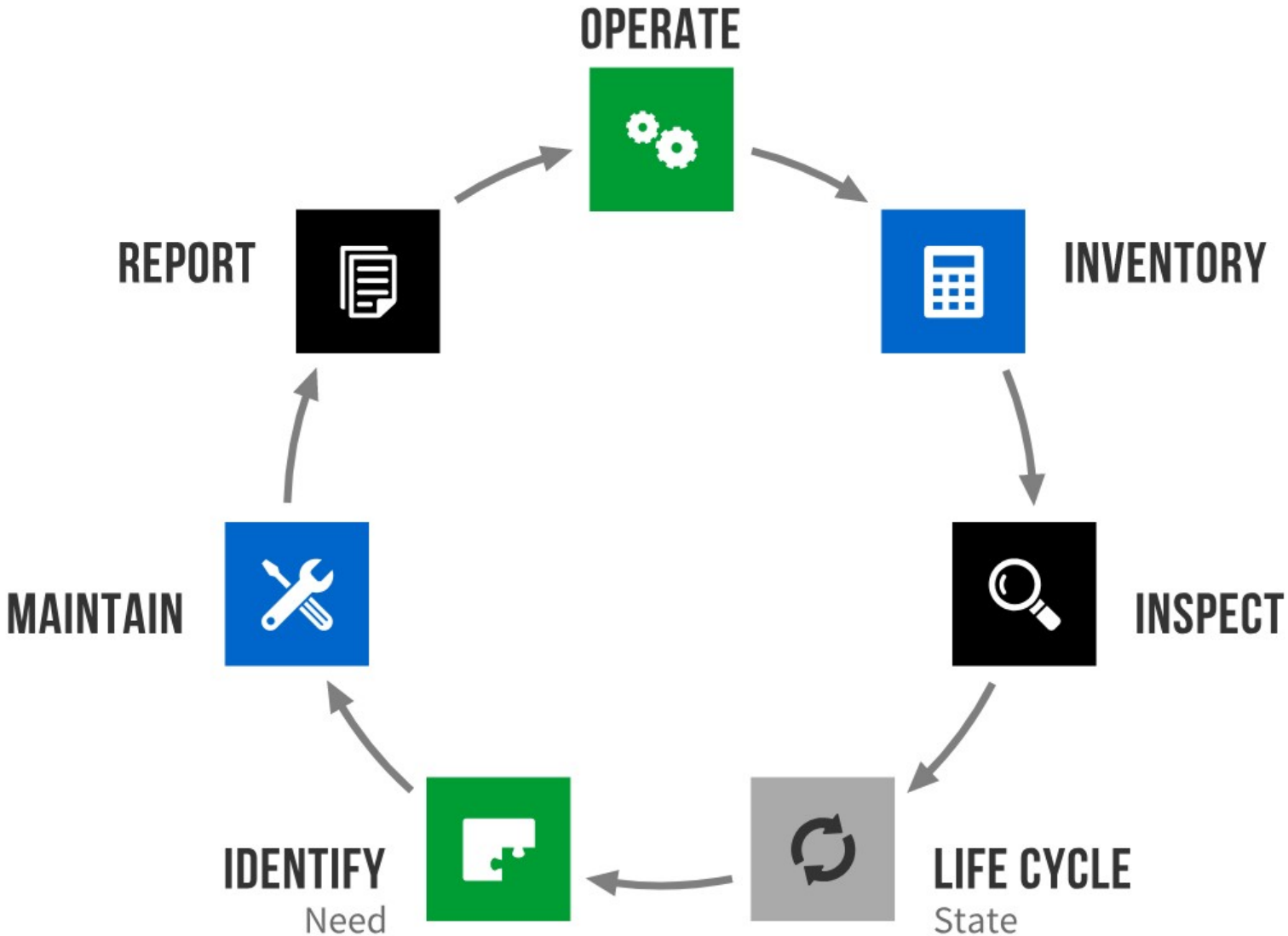
- Based on the bridges location estimate life cycles.
- Estimate Deterioration Curves for the life of the structure.
- Prepare cost scheduling for estimated cost of deterioration.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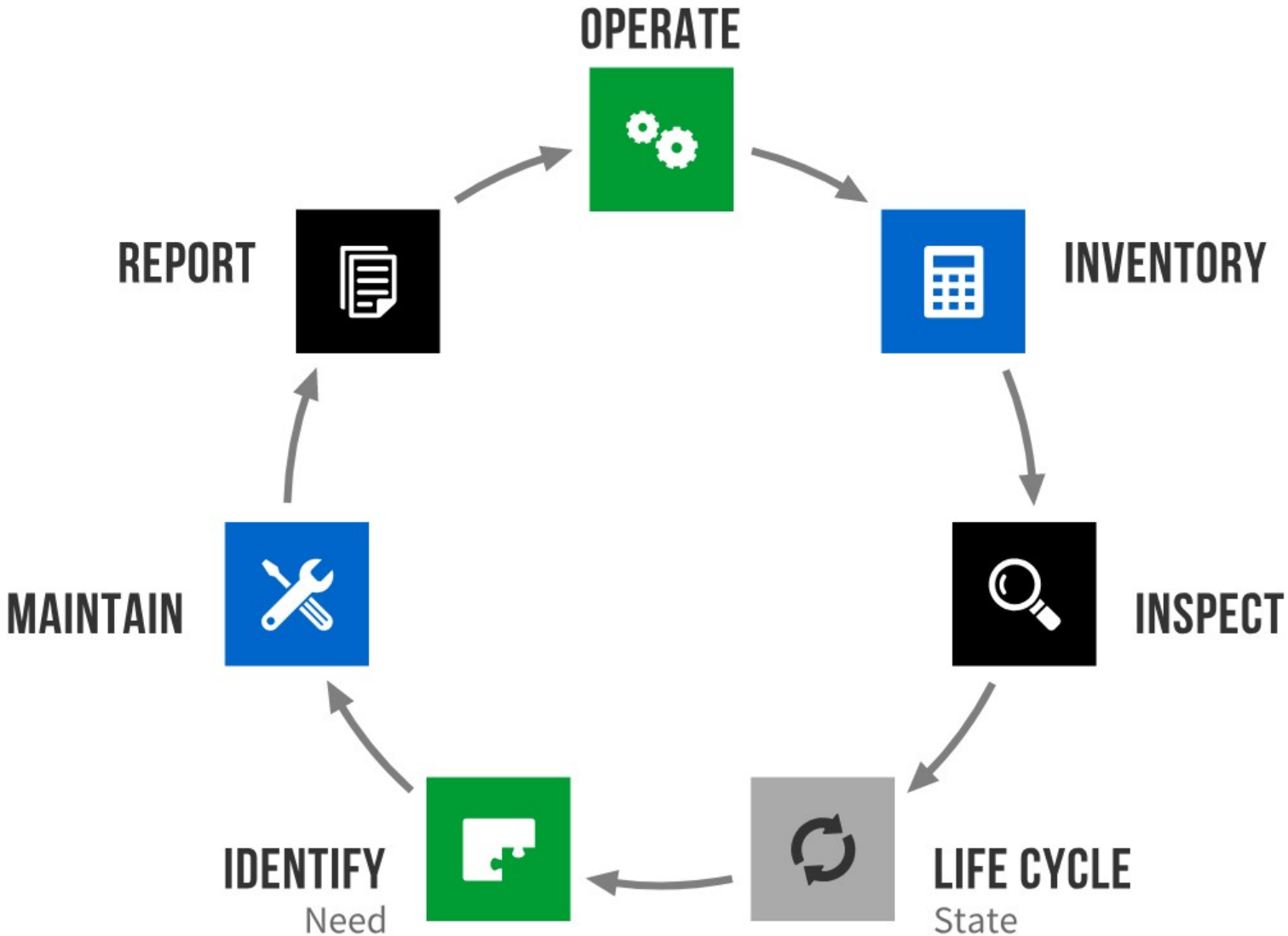
- Identify the need of repairs and projections to prepare programs of maintenance.

- Apply any needs for future expansion and operation needs.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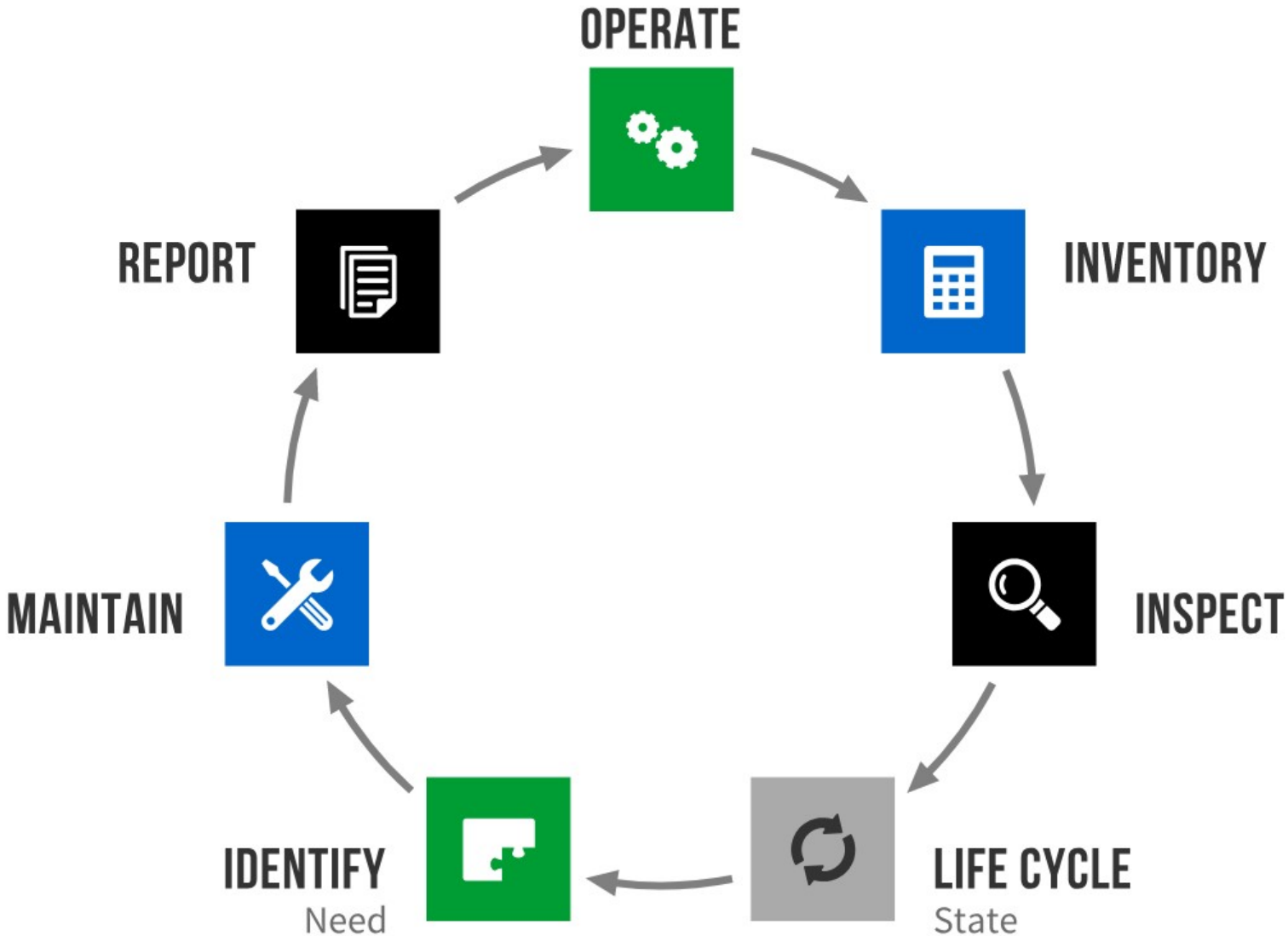
MAINTAIN

- Preform the maintenance.
- Use of Asset management Software to manage repair tasks.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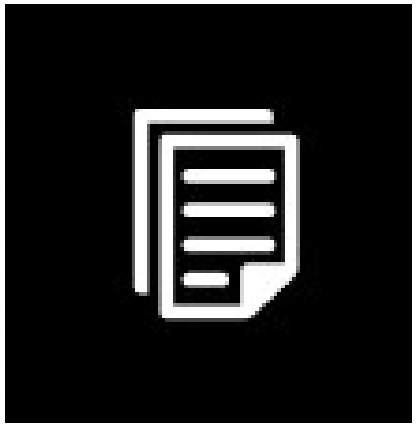
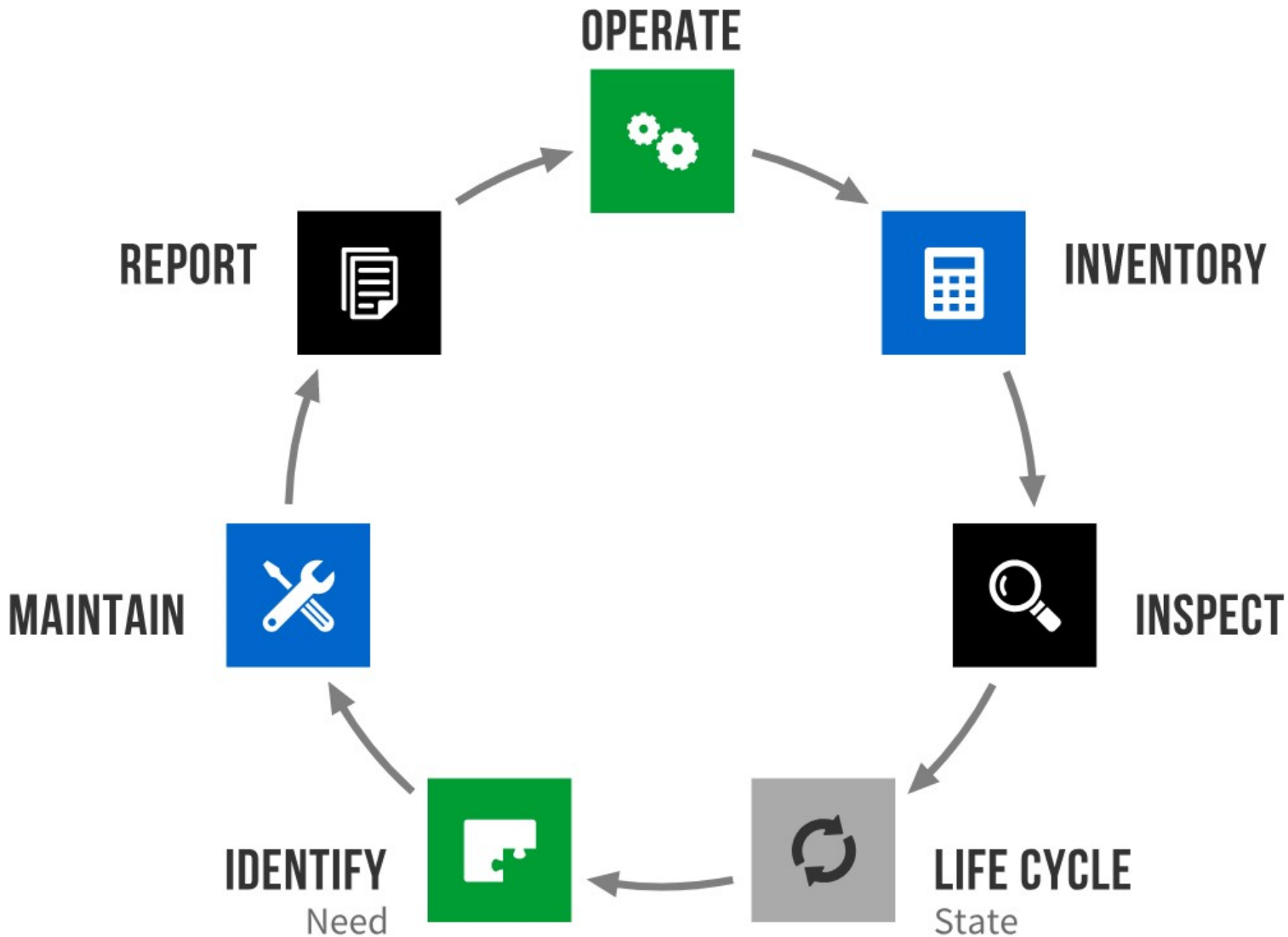


- Report on the completion of repair tasks.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Thank you