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10 keys to CMMS implementation success

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Accelix™
Webinar Series

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Capacity Assurance Consultant
Fluke Reliability

- Former maintenance practitioner (healthcare), with more than 20 years of maintenance & reliability experience – especially within CMMS realms

- Extensive background in maintenance & reliability concepts

- Proficiently focused on CMMS implementation initiatives with 300+ CMMS implementations under his belt

- Fluke Reliability subject-matter expert presenting at leading industry conferences; content provider for leading industry periodicals and magazines

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POLL QUESTION No. 1

What is your most important driver for seeking to implement a CMMS?

(Click only one answer)

- Align people and processes with organizational goals and objectives

- Aid in continuous improvement initiatives to achieve targets

- Increase visibility and accountability

- Capture maintenance costs and activities

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Agenda

- What a CMMS is and, more importantly, isn't

- The functionality of a CMMS

- The purpose of a CMMS

- Why an organization needs a CMMS

- 10 keys to CMMS implementation success

- Questions & answers

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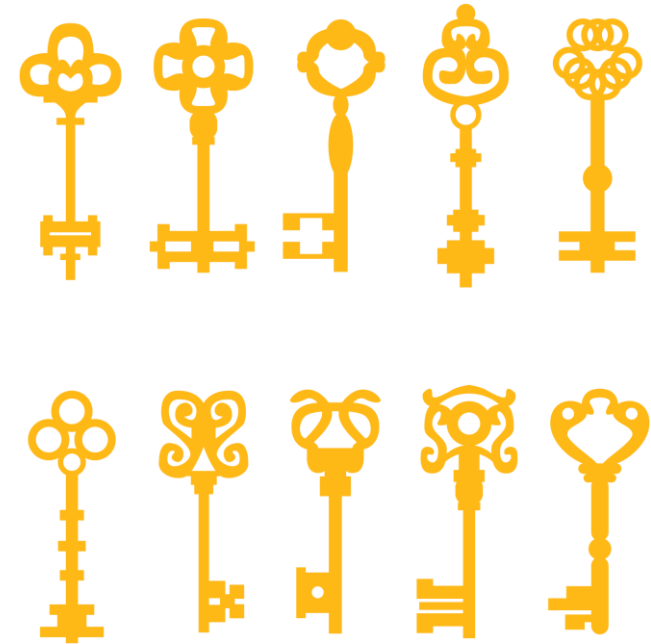
What is a CMMS?

Computerized maintenance management system (CMMS) is a software package that maintains a computer database of information about an organization's maintenance operations. CMMS data may also be used to verify regulatory compliance.

CMMS: Computerized maintenance management system

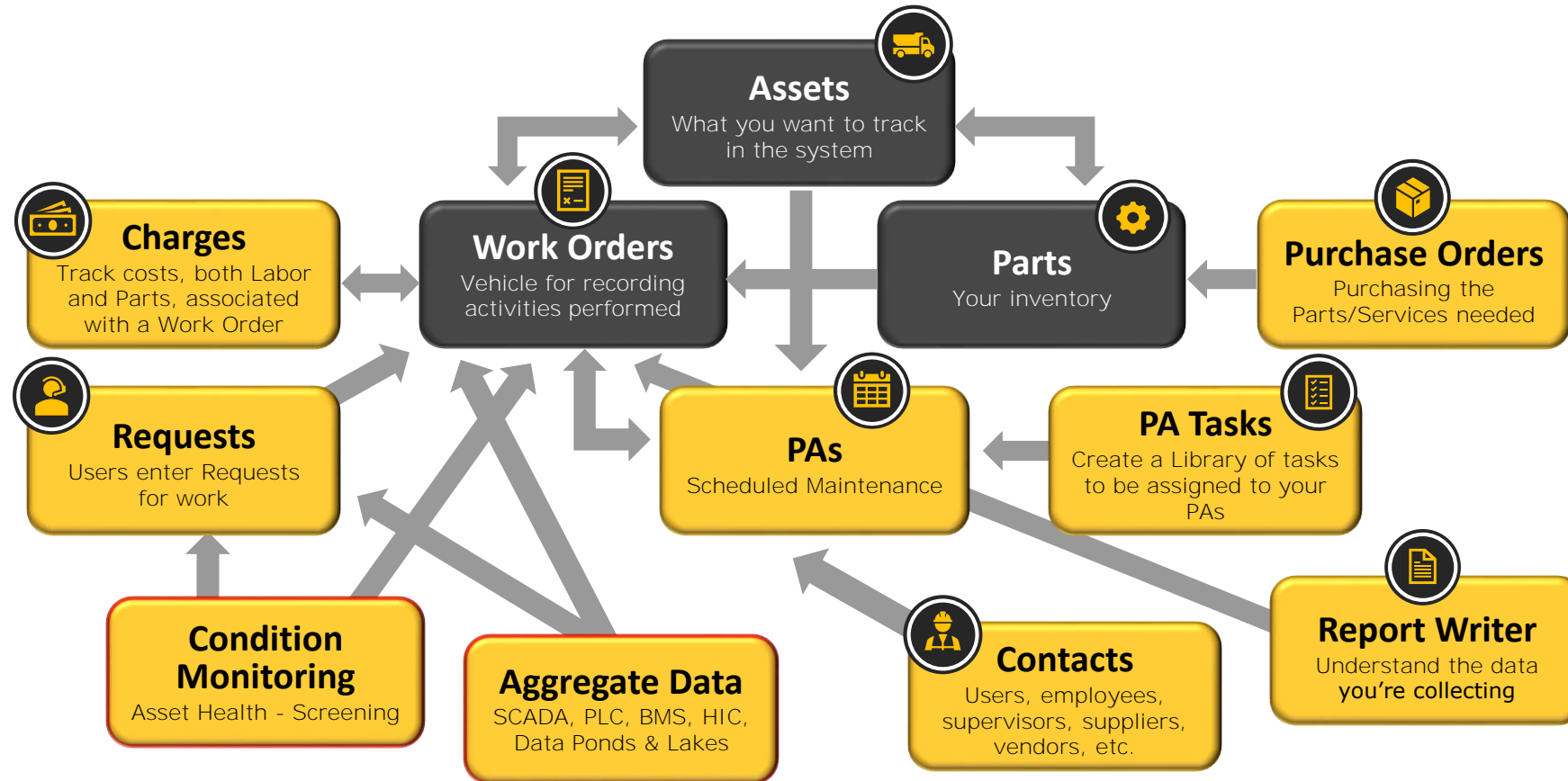**EAM**: Enterprise asset management

What a CMMS is NOT:

- Financial system
- Procurement system
- Magic wand

https://en.wikipedia.org/wiki/Computerized_maintenance_management_system

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The functionality of a CMMS

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What is the purpose of a CMMS?

Historian of empirical and physical data storage

Manages and controls your work management / parts usage processes

Tracks maintenance activity over the lifecycle of an asset

Why an organization needs a CMMS

- Tells the story of the asset (health)

- Tells the asset management story (not just maintenance)

- Aids in reduction to operational costs

- Eliminates manual (analogue) processes

- Improves customer satisfaction

- Cornerstone of work execution management

- Increases visibility and transparency

- Helps meet or ensure regulatory standards

- Increases worker productivity

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#1 – Implementation team

Selected from a cross-functional array of internal team members (stakeholders)

Members may come from a variety of departments or sister operational sites:

- Maintenance
- Operations
- Materials management
- Information technology
- Planning
- Purchasing
- Finance
- Management
- Consultants

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#1 – Implementation team (2)

Senior leadership →	Approves/provides funding
Maintenance leader(s)	
Champion(s) →	Advocates the advantages of system
System administrator (future) →	Manages how the system is used
Project leaders	
Project manager →	Assures implementation is on track
Analyst →	Gathers requirements
Subject matter experts (SMEs) →	Define how the system is used
IT staff member(s) →	Provide system environment
Implementation consultant(s) →	Provide specific expertise

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#2 – Core team familiarization

Can't stress this one enough! ⬇

- … ***understand the functionality*** of the new CMMS platform

- Upfront new system overview and training

- Worst mistake is to ***Assume*** – Implementation time isn't the time to whiteboard how you ***feel*** the system should work out of the box

- Lay the framework ensuring system capabilities are understood

- The Core Team should become your site's system experts and future trainers

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#3 – Workflows & SOPs to PCDs

Do yourself one huge favor and document "how" you do things today. Implementation isn't the time to "figure it all out." It is OK to document what you believe is a broken process…at least it is a process to document.
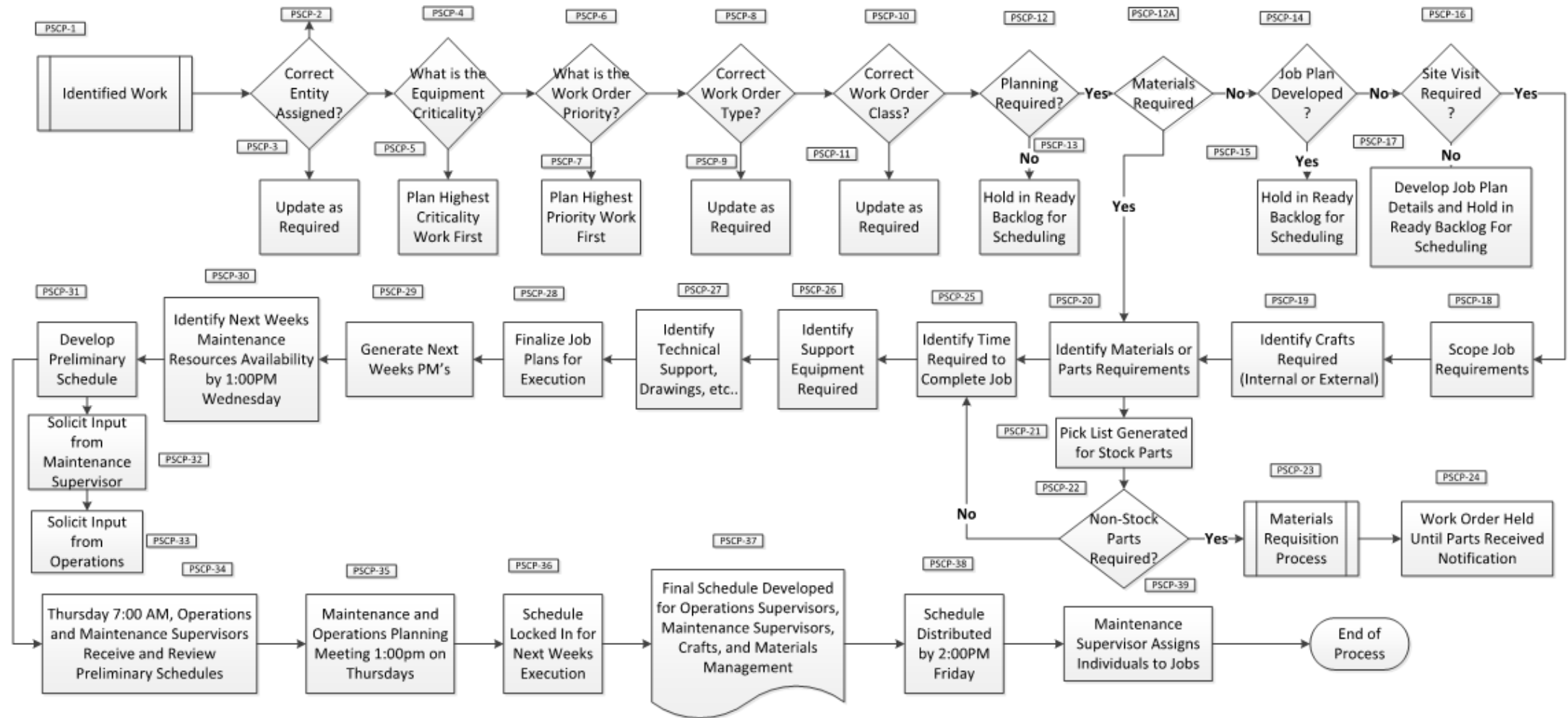
Basic workflow processes:

- Asset management / life cycle management

- Work request / work order management / work execution

  - Scheduled maintenance

  - Routine work

  - Emergency work

- MRO management (spares)

- Procurement

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#3 – Workflow process development

Planning Scheduling & Coordinating Process

#3 – SOPs to PCDs

Documenting phase that captures As-Is developed processes directly related to CMMS usage and published for document control called Process Control Documentation (PCDs)

- Definitions of all workflow procedures / steps
- [Who is responsible?](#) (RASI)
- Key metrics / KPIs related to the process
  - Leading metric
  - Lagging metric

Work Close Out, Work History, and Report Metrics Process Steps

Supporting documentation for specific activities in external programs (i.e. CMMS, etc.) have been identified within this document to ensure standardized data input. These documents will be part of the <CUSTOMER> Maintenance Policies & Procedures manual and will be controlled by a Management Of Change (MOC) program and subject to routine auditing.

The intent of this process flow is to ensure completed work is properly closed out and committed to history ensuring reportable metrics or KPI information. This critical step ensures the organization can transition to making data driven decisions through data harvesting opportunities utilizing valid data, which reflects the true operating environment of the equipment.

CWOTCH-1 Work Completed

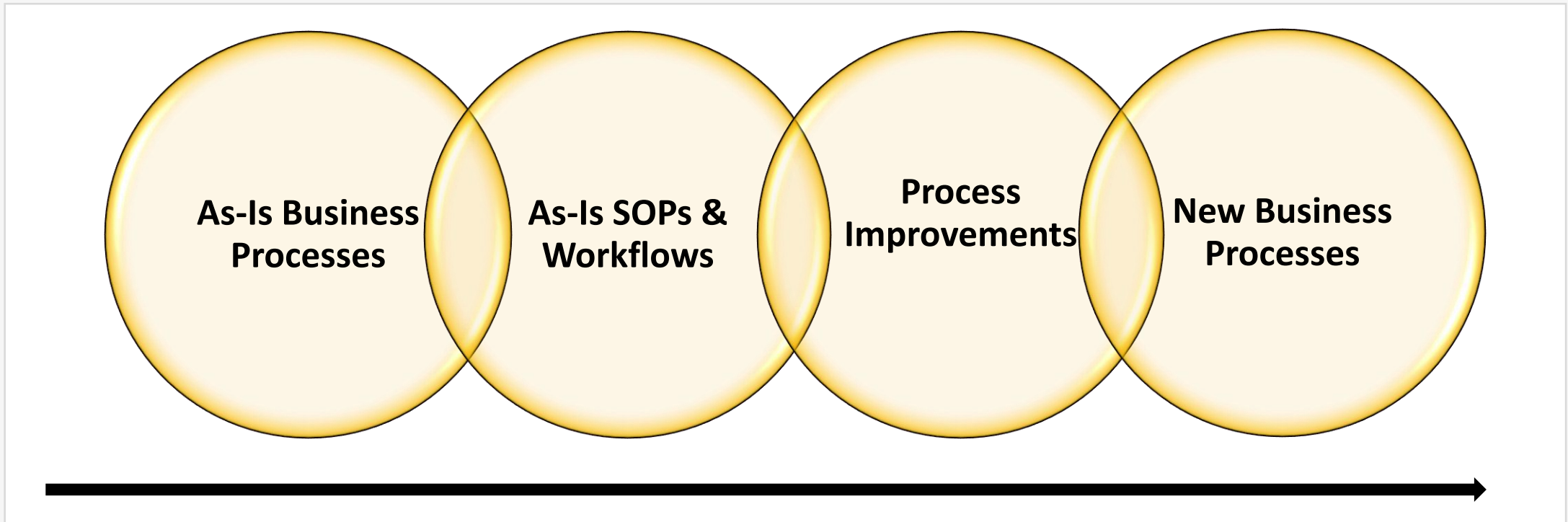Work or job is completed and ready to commit to history.

WOTCH-2 Plan Close Field CLOSE or TEMP REPAIR?

Close field (indicating work has been complete) is populated with **CLOSE** indicating TEMP REPAIR indicating a new Work Order must be established for permanent

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New business process development

As-Is Business Processes

As-Is SOPs & Workflows

Process Improvements

New Business Processes

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#4 – Data standards

Data standards are the rules by which data are described and recorded. In order to share, exchange, and understand data, we must standardize the format as well as the meaning.

- Defining the tables
- Defining the fields and field properties (behaviors, data types, etc.)
- Defining data entry nomenclature (descriptions, upper/lower, etc.)
- Defining CFR 21.11 inclusionary compliance (FDA)
- Defining the maintenance codes to be adopted / deployed
  - WO categories, types, sub-types, etc.
  - Job status for work execution routing
  - WO priorities with time defined intervals
  - Asset types, sub-types, P&ID, attributes
  - Accounting codes
  - **RM data** (reliability data coding) to capture empirical asset data (cause, action, failure)

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?

Why do YOU think many CMMS implementations fail?
(Click only one answer; many may apply but choose what ranks highest)

- Lack of vision

- Poorly defined objectives

- Lack of management buy-in

- Insufficient training

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#5 – System and data planning (implementation)

Define your initial approach and go-forward plans launching your new CMMS platform.

Notice this is not Step #1

- Defining an initial implementation timeline

- Defining the go-forward plan (go-live secession)

- Establish critical success factors

- Identify and plan data acquisition / assimilation needs (data collection, integration, interfacing, etc.)

- Data systems alignment planning (CMMS to Procurement, CMMS to Finance, visa versa, etc.)

- Leverage the experience of an experienced CMMS implementer for guidance (vendor or internal)

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#6 – Data population & validation

Garbage in… garbage out!

- Asset data is critical for the success of your CMMS implementation, but only if you have the right amount of quality data

- All data that goes into the system needs to be maintained and all maintained data needs to go into the system

- Data acquisition stage via connected aggregates (API, SCADA, BAS, etc.) alignment

- Data collection / validation execution stage

- Data assimilation stage: Now is the time to apply the standards developed during the data standard outlined in Step #4

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#7 – System configuration / acceptance testing

Forms, fields, dropdowns, tabled data, intuitive interactions, autonomous interactions, etc.

- Derived and driven from the defined data standards documented in SOPs to PCDs

- "Users of system vs. users of data" -- purpose is to ensure data entry consistency with established data standards

- Workflow executions (process flows) refinement

- Acceptance testing phase
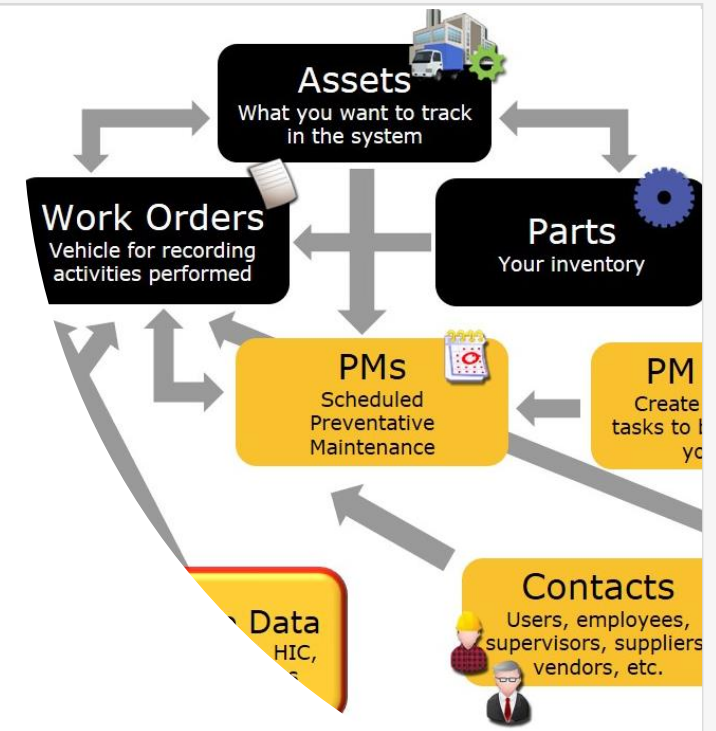
#8 – Training main users

End-user training is a critical step you should strongly consider to ensure your organization's investment in the system.

Training options

- Online training
- On-site training

Train the trainer

- Internal trainer needs to become proficient with the new CMMS at a level higher than that required of the end-users
- Internal trainer needs to possess the soft skills in communications and organization
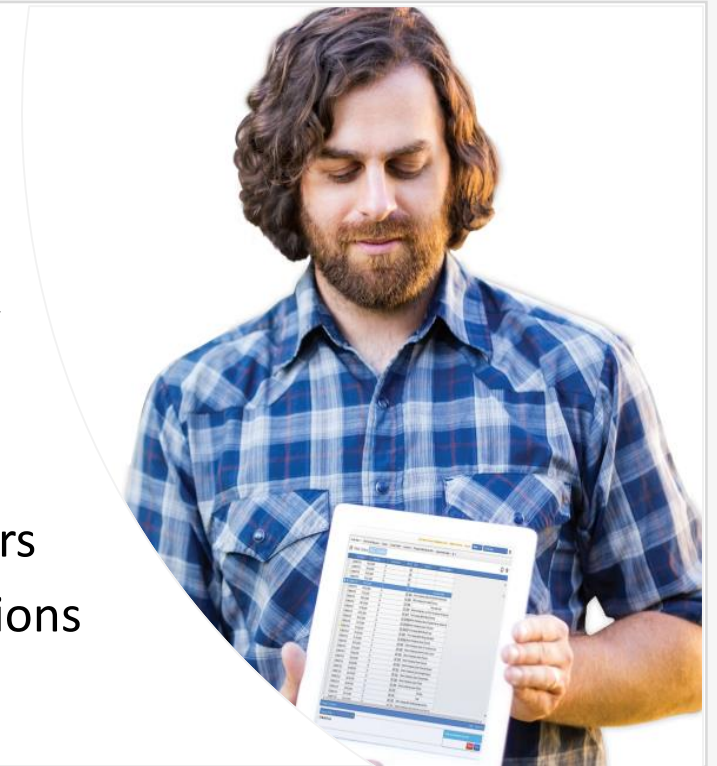
#9 – Go-live strategy

May encompass multiple soft "go lives" in regards to certain areas of use within the CMMS that can be simultaneous or sessional.

- Conduct a thorough testing (acceptance) of the established processes and procedures developed to support each of the documented maintenance functions within the new CMMS platform

  - **You will never ever be fully Implemented**
    - Soft go-lives = implementation milestones
    - Continuous and ongoing

  - **Soft go-live key considerations**
    - Multiple locations
    - Data gathering / population project(s)
    - Integration
    - Licensing issue
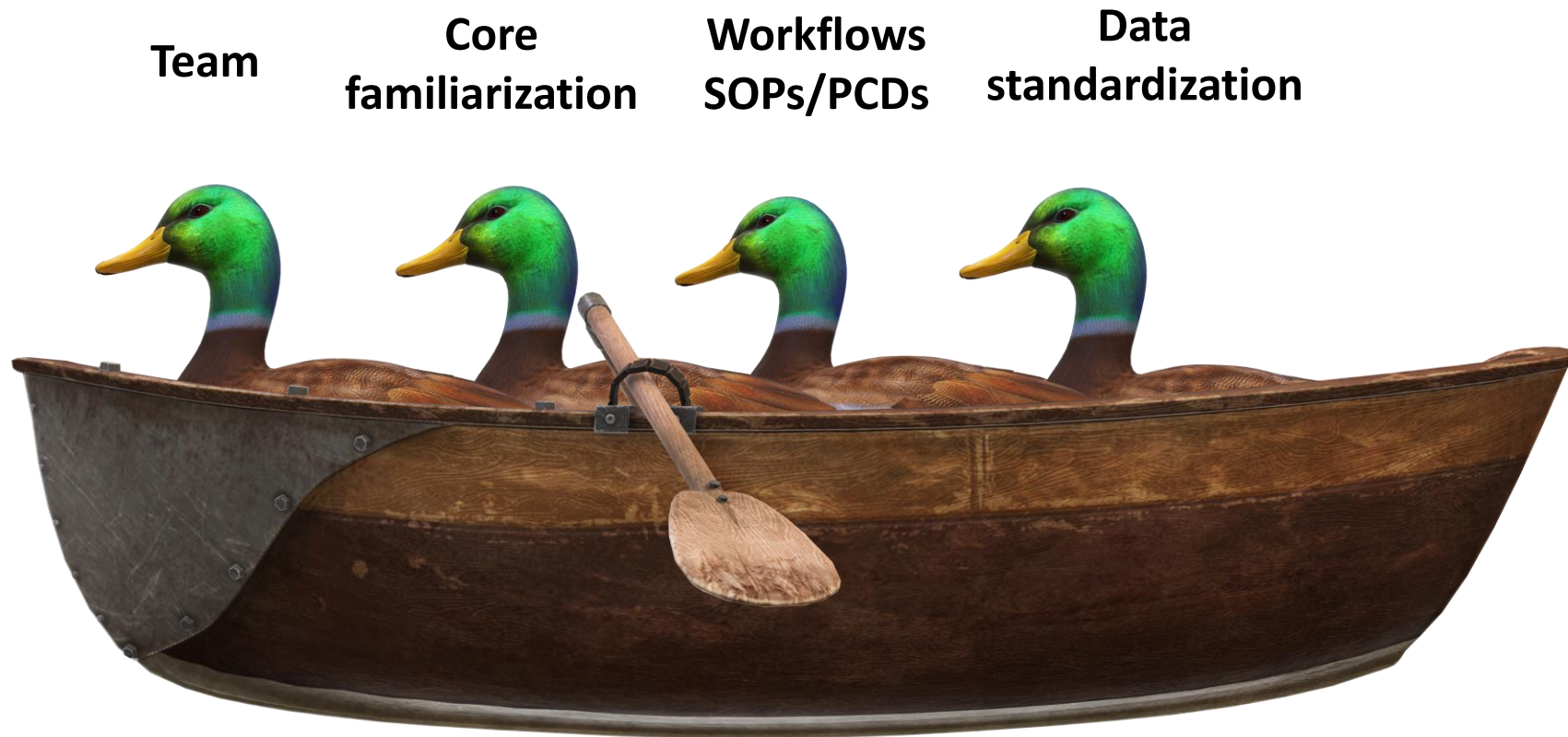   - Pilot program
    - Technology / hardware

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#10 – Process auditing

- Continuous improvement (Kaizen) approach

- Keep momentum going year-over-year

- Define go-ahead key metrics (include examples)

- Establish a review process and team (CMMS user group) responsible for SOPs to PCDs to ensure completeness and accuracy between expected versus actual

- Establish IMMEDIATELY after any go-live to ensure bad habits are not allowed out of the gate

- Identify the next milestone / implementation phase

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Getting your ducks in a row

Team   Core familiarization   Workflows SOPs/PCDs   Data standardization

CMMS implementation initiative

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10 keys Agile approach

- Business process mapping

- Dotted-lined box represents the identified Critical Success Factors needed in the Initial Implementation milestone

- Out of scope items are separate (ancillary) milestone / projects

- Each [key icon] represents a workstream that may incorporate a milestone / project unto itself

- Each workstream incorporates and follows the 10 key steps approach intrinsically

The *10-Keys* Agile Approach

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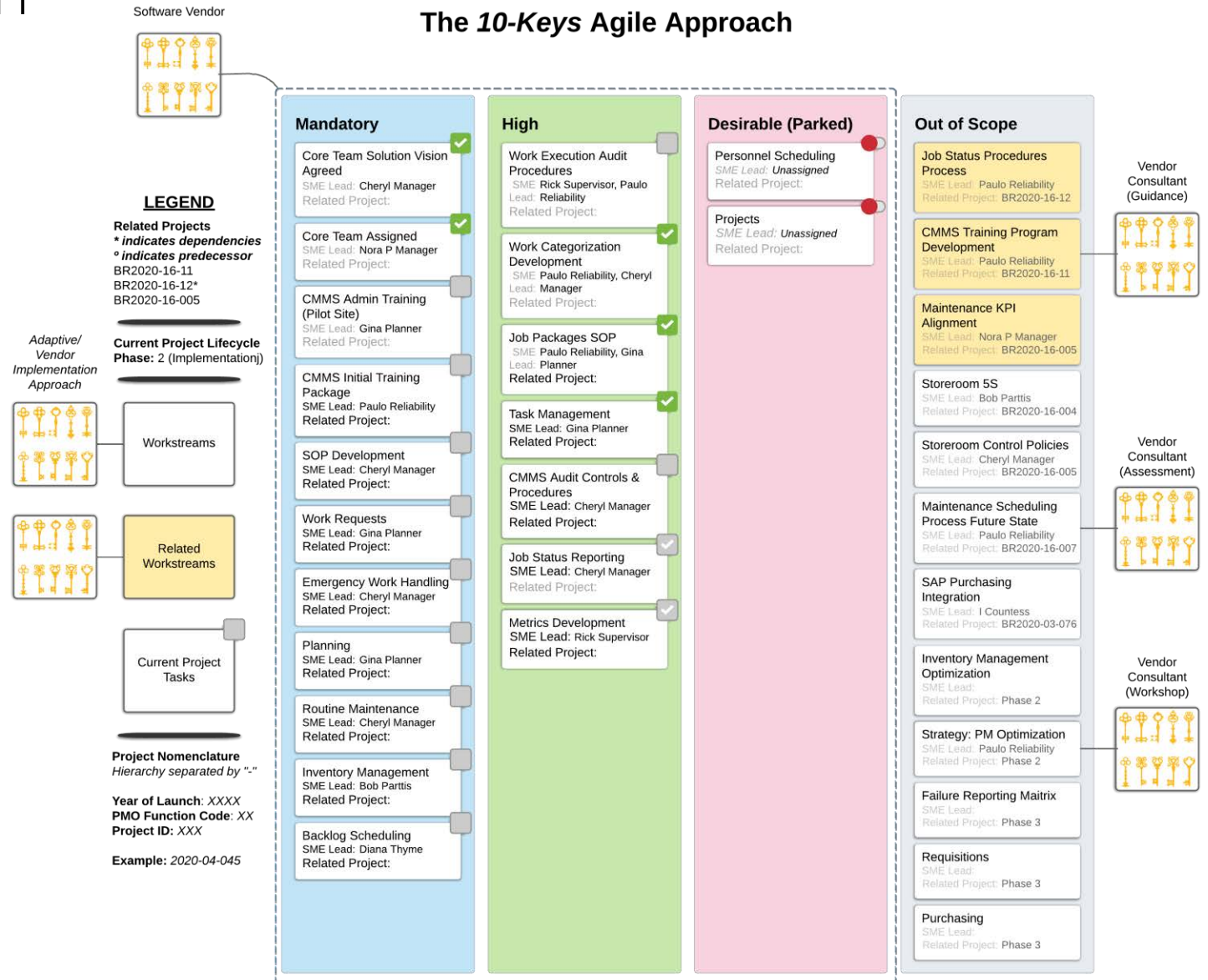
Apply 10 keys over and over for each milestone on your CMMS journey

Initial CMMS Implementation:
- Core Team
- Familiarization
- Work Flows, SOPs, PCDs
- Data Standardization
- Implementation Plan
- Data Assimilation & Validation
- System Configuration and Acceptance Testing
- User Training
- Go-Live Plan Execution
- Audit

Milestone 1

Integration Implementation:
- Core Team
- Familiarization
- Work Flows, SOPs, PCDs
- Data Standardization
- Implementation Plan
- Data Assimilation & Validation
- System Configuration and Acceptance Testing
- User Training
- Go-Live Plan Execution
- Audit

Milestone 2

MRO (Spares) Implementation:
- Core Team
- Familiarization
- Work Flows, SOPs, PCDs
- Data Standardization
- Implementation Plan
- Data Assimilation & Validation
- System Configuration and Acceptance Testing
- User Training
- Go-Live Plan Execution
- Audit

Milestone 3

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Review of the 10 keys to success

- Implementation team

- Core team familiarization

- Workflow & SOPs to PCDs

- Data standardization

- Implementation plan

- Data assimilation & validation

- System configuration / acceptance testing

- Training main users

- Go-live strategy

- Process auditing

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QUESTIONS?

Thank you!

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BEST PRACTICE WEBINAR
Wednesday, June 17, 11 a.m. ET

How to lead and maintain reliability in a crisis
What's changed and what hasn't in these challenging times of virus-driven decision making? As asset management and other maintenance and reliability activities continue, adherence to new pandemic-prompted standardized best practices is even more critical.

In this webinar, educator and expert **Dr. Klaus Blache** discusses:
- challenges and opportunities brought on by the pandemic;
- how great things can be accomplished during a crisis;
- what the "new normal" means for maintenance strategies;
- the importance of being resilient, and
- what to focus on as a leader during a crisis.

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