UNDERSTANDING THE SMRP BODY OF KNOWLEDGE

BY: **RICKY SMITH, CMRP, CMRT, CRL**

UpKeep

WORLD CLASS MAINTENANCE

GIVING BACK TO MOVE MAINTENANCE FORWARD
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THE MAINTENANCE COMMUNITY COALITION
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Understanding the SMRP Body of Knowledge

February 2 at 6pmET -Understanding the "Body of Knowledge"

February 9at 6pmET -Preparing for Maintenance Certifications -Tips + Tricks

February 15at 6pmET-Everything to know about a Proactive Maintenance Storeroom

February 22at 6pmET-Writing Repeatable Corrective Maintenance and Preventive Maintenance Procedures

By Ricky Smith CMRP

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Download these slides at:
www.worldclassmaintenance.org

Thanks to UpKeep CMMS for Hosting this event ...

Upkeep CMMS –Take a "Test Drive Today"

We appreciate UpKeep'sassistance sponsoring these webinars for all Maintenance and Reliability
<u>Professionals at no charge</u>

TheMaintenance Community Groupis a space for all of us inmaintenance and reliability—a digital break room if you will.

They host regular webinars and conversations with ourMaintenanceExperts. TheMaintenance Communityforum is backed by UpKeep which employs 100 people worldwide to broaden industry knowledge for maintenance teams.

Join the Slack Group -I will text you this link:

http://upkeep.typeform.com/to/tSeZ9fVx

What is the SMRP Body of Knowledge?

- TheSMRP Body of Knowledge(BoK) is a roadmap to world-class performance in maintenance, reliability and physical asset management.

- The SMRP Body of Knowledge was designed to assist any organization structure and manage Maintenance and Reliability in any organization.

- The five pillars of the SMRP Body of Knowledge (BoK) are a roadmap to world-class performance.

- Each pillar details an area of maintenance, reliability and physical

asset management that practitioners and professionals should be proficient in to improve their careers.

- The BoK forms the framework for all SMRP educational offerings and programs.

- Knowledge of SMRP Body of Knowledge is part of the SMRP
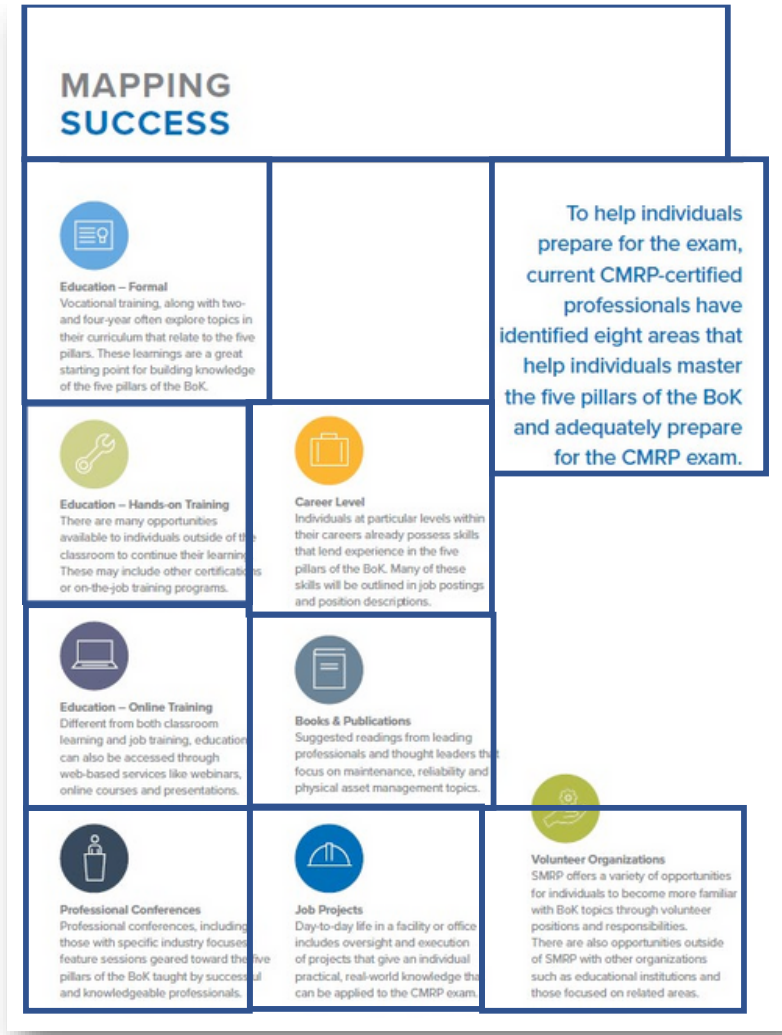
Certifications (CMRP, CMRT, CAMA)

https://www.smrp.org/Portals/0/CMRP%20Roadmap.pdf
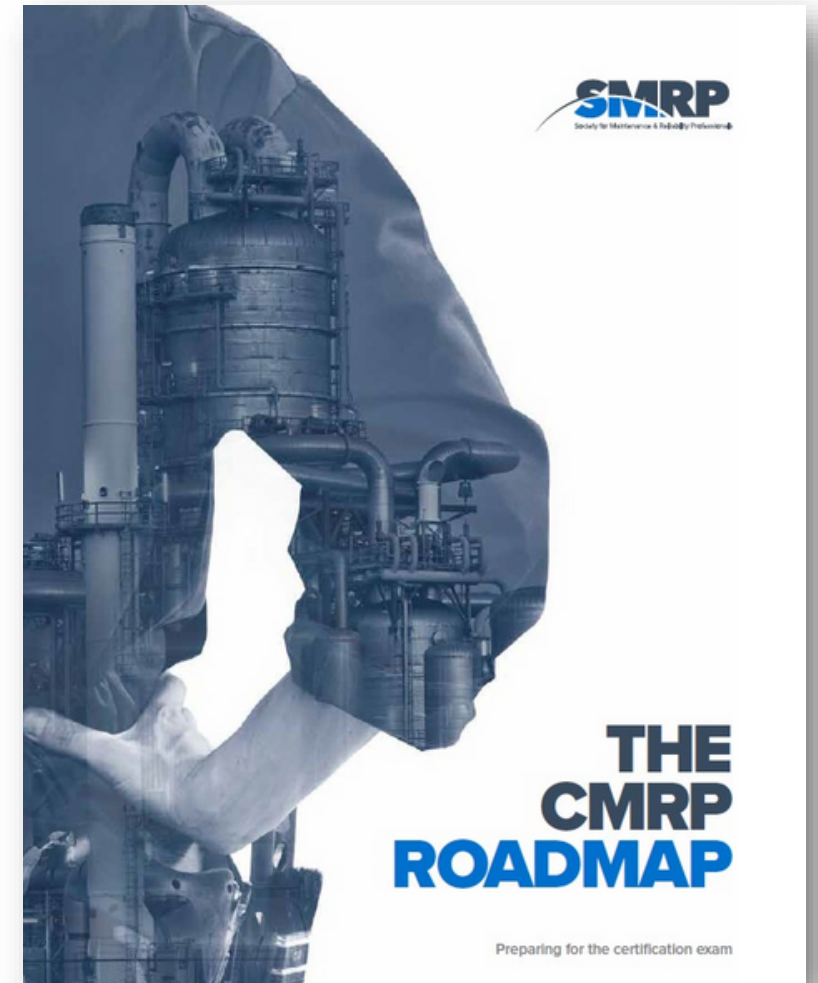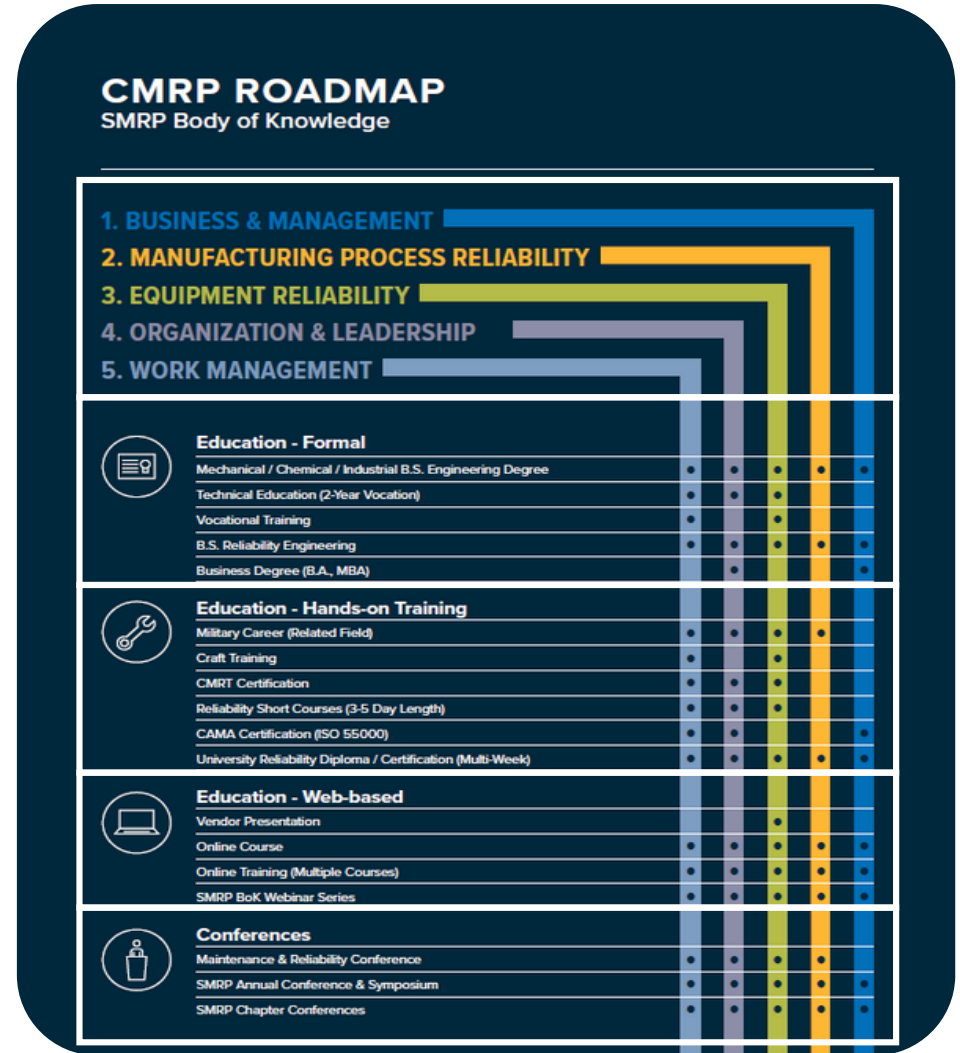
The CMRP / CMRT Certification

- CMRP Certification
  The Certified Maintenance & Reliability Professional (CMRP) program is the leading credential for certifying the knowledge, skills and abilities of maintenance, reliability and physical asset management professionals.

- The CMRP is the only certification program of its kind accredited by the American National Standards Institute (ANSI), which follows the globally recognized ISO standards for its accreditation purposes.

- CMRT Certification
  The Certified Maintenance & Reliability Technician (CMRT) program is the leading credentialing program for the knowledge, skills and abilities of maintenance and reliability technicians.

- The CMRT certification assesses the knowledge and skills of those responsible
  for preventative, predictive and corrective maintenance –multi-skilled individuals who play a critical role in the success of organizations worldwide.

- CAMA Certification

- The "CertifiedAsset Management Assessor" (CAMA)certificationestablishes an individual's credentials in asset management knowledge and comprehension, globally. ... Or simply establish your asset management knowledge.

The SMRP Body of Knowledge is the Framework for the CMRP which Maps Success for any Maintenance and Reliability Professional

The CMRP Roadmap

The CMRP Roadmap, cont.

Pillars of the SMRP Body of Knowledge (BoK)

The following are pillars of the BoK:

1. Business & Management;
2. Manufacturing Process Reliability;
3. Equipment Reliability;
4. Organization & Leadership;
5. Work Management.
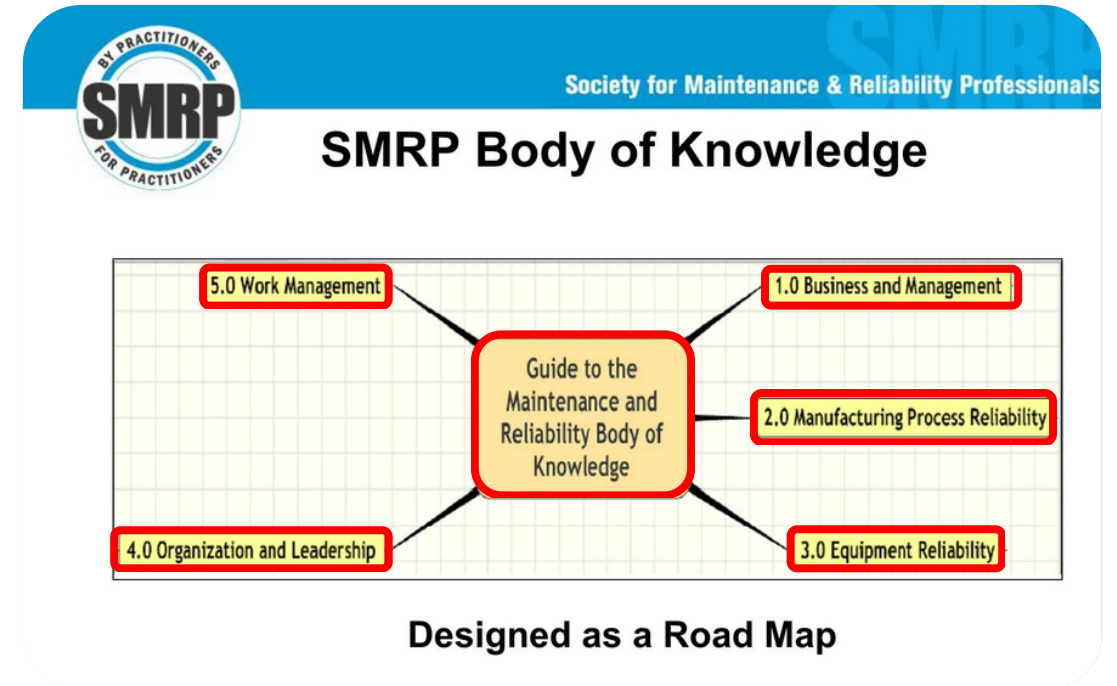
Pillar 1.0 –Business and Management

1.0 Business & Management ....

1.1 Create Strategic Direction and Plan for M&R Operation ....

1.2 Administer Strategic Plan ....

1.3 Measure Performance ....

1.4 Organizational Changes ....

1.5 Communication with Stakeholders ....

Pillar 1 Metrics Appendix ....

SMRP Body of Knowledge

Society for Maintenance & Reliability Professionals

5.0 Work Management	1.0 Business and Management
Guide to the Maintenance and Reliability Body of Knowledge	2.0 Manufacturing Process Reliability
4.0 Organization and Leadership	3.0 Equipment Reliability

Designed as a Road Map
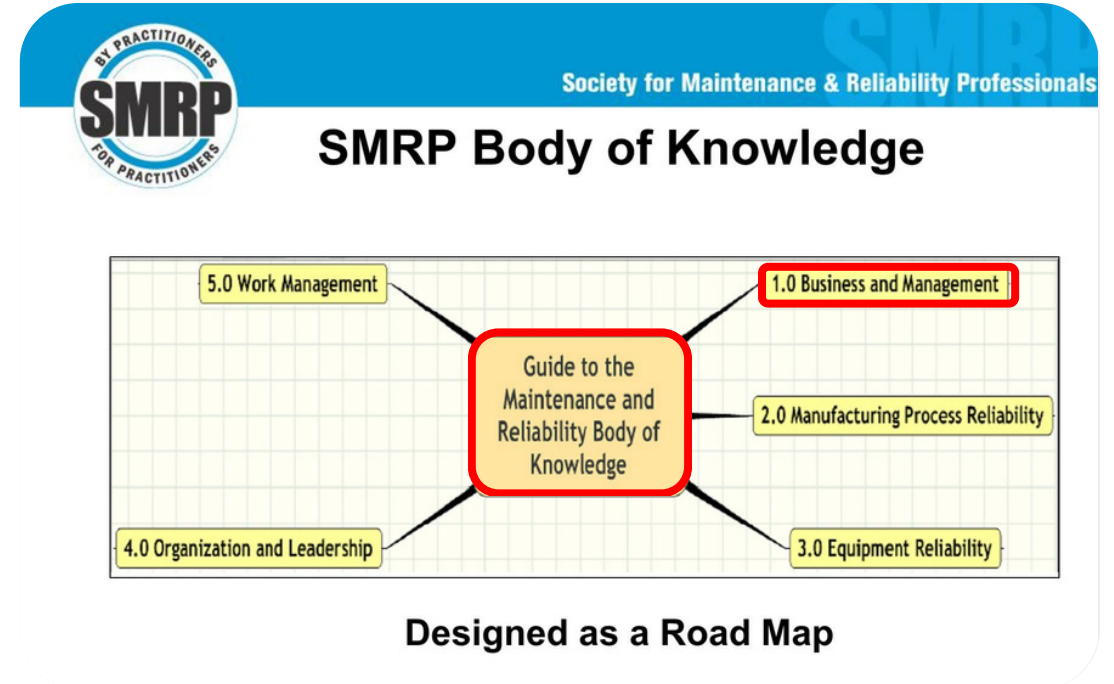
Pillar 1.0 –Business and Management, cont.

Maintenance and reliability leaders create a vision and a mission as well as a strategic plan, to guide implementation of appropriate maintenance and reliability systems and processes, in order to achieve organizational business goals.

The strategic plan provides a clear purpose (a demonstrated business need), defined goals and, in turn, benefits to the organization.

Goals should be clear, measurable and established in a top-down (cascading) manner.

Maintenance and reliability leaders utilize their knowledge of industry benchmarks to assist in establishing these goals, provide a measurement system, and determine gaps in their maintenance and reliability processes.

It is important for operations, maintenance, and other involved disciplines to agree on the goals and the measures used to quantify them.

Equally important is an understanding of everyone's role in the strategic plan and the responsibilities they have.

Routine review and discussion of progress will provide team commitment and allow for periodic adjustments to the plan that may be required.

SMRP Body of Knowledge

Society for Maintenance & Reliability Professionals

- 5.0 Work Management
- 1.0 Business and Management
- Guide to the Maintenance and Reliability Body of Knowledge
- 2.0 Manufacturing Process Reliability
- 4.0 Organization and Leadership
- 3.0 Equipment Reliability

Designed as a Road Map
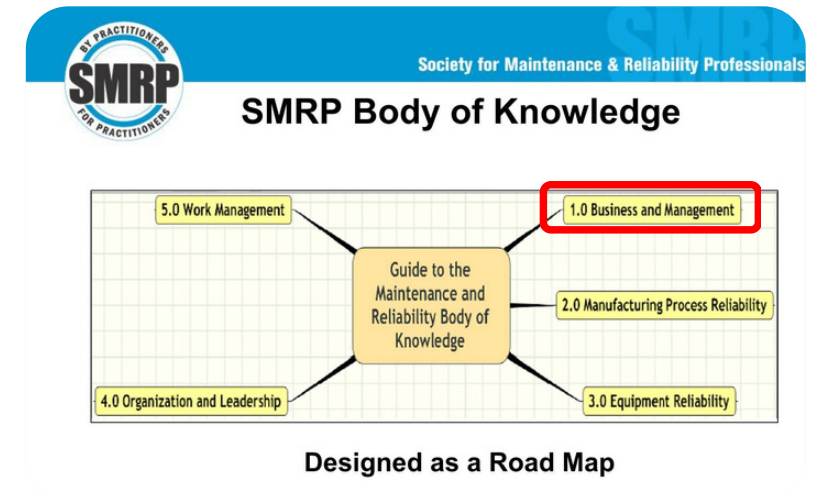
Pillar 2.0 –Manufacturing Process Reliability

•This subject area relates maintenance and reliability activities to the
   manufacturing or production process of the organization, to ensure that
maintenance and reliability activities improve the manufacturing or
production process.

•This subject requires an understanding of applicable processes:

document process flow, process parameters, quality specifications,
process risk and operating procedures.

•A complete understanding of processes that influence the performance
    and safety across all disciplines and at all levels of the organization can
provide tremendous benefit.

•The ability to react appropriately to changing conditions in the process
     allows for real-time process control and optimization. This ability to react
    to change applies not only to one's direct function but also to its effects
on the total process.

•Process understanding includes how to start up, operate, shut down,

analyze and troubleshoot; and it also includes methods for
    communicating and documenting continuous improvement activities in
operations, maintenance, quality and safety.

•Clearly defined the standard operating procedures and flow diagrams of

processes are helpful tools in communicating and documenting the
desired process performance.

Society for Maintenance & Reliability Professionals

SMRP Body of Knowledge

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2.0 Manufacturing Process Reliability
4.0 Organization and Leadership
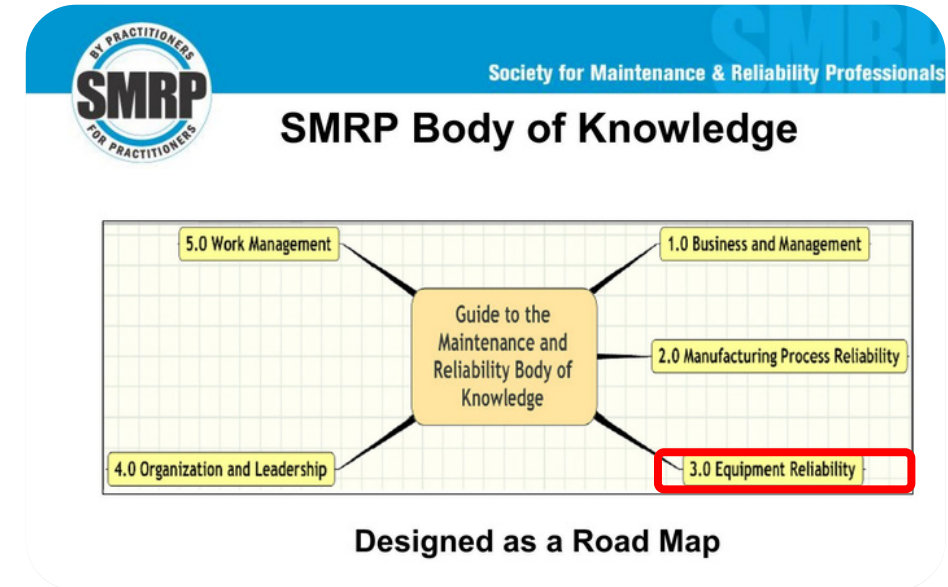3.0 Equipment Reliability

Designed as a Road Map
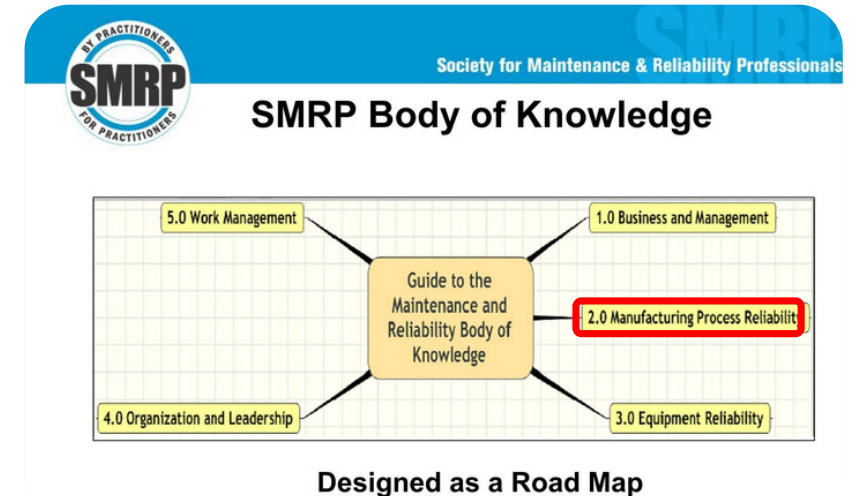
Pillar 3.0 –Manufacturing Process Reliability

This subject area describes two kinds of activities.

**They concern the equipment and processes for which the maintenance and reliability professional is accountable.**

The first kind is used assess the current capabilities of the equipment and processes in terms of reliability, availability, maintainability, and criticality.

The second kind is used to select and apply the most appropriate maintenance practices, so the equipment and processes continue to deliver their intended capabilities in the safest and most cost-effective manner.

SMRP Body of Knowledge

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4.0 Organization and Leadership		3.0 Equipment Reliability

Designed as a Road Map

Pillar 4.0 –Organization and Leadership

This subject area describes processes for assuring that the maintenance and reliability staff is well qualifiedand assigned to achieve the maintenance and reliability organization goals.
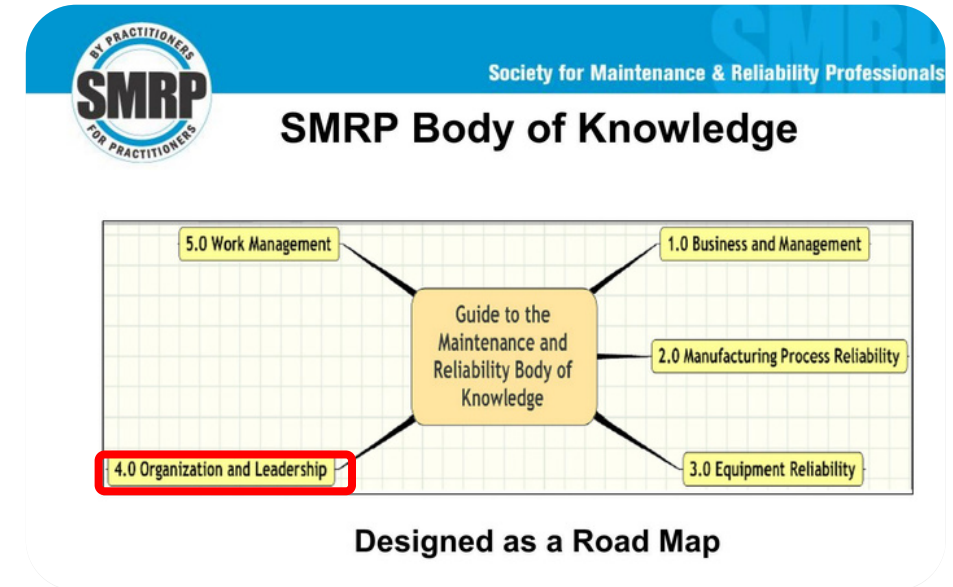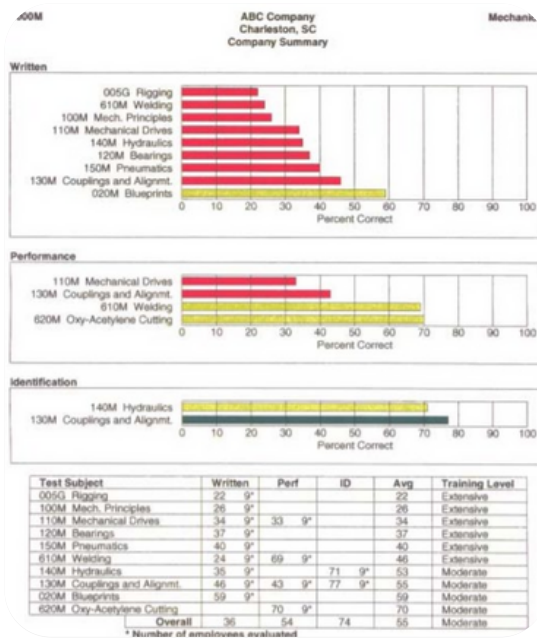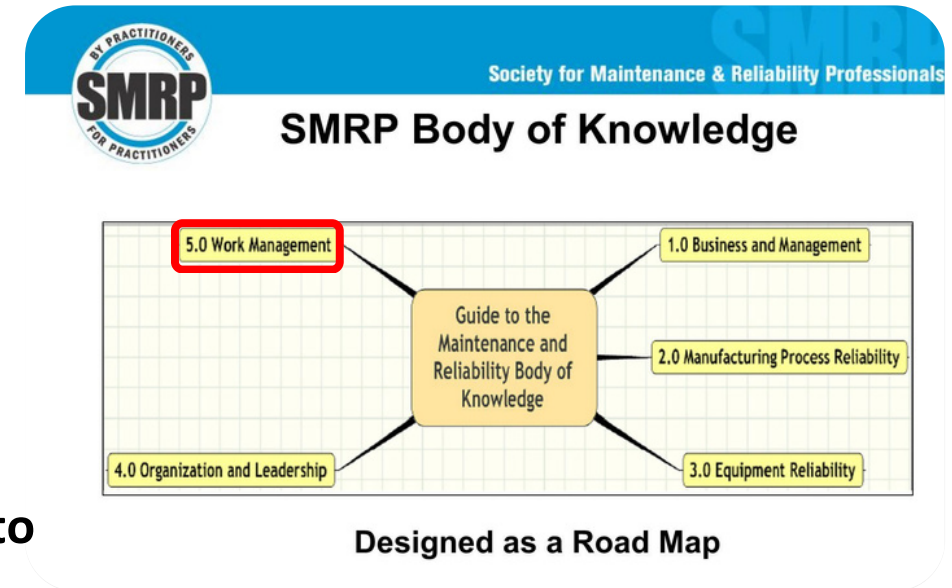
Pillar 5.0 – Work Management

The persons who identify maintenance requirements need to know types of actions that can be taken and when they should be taken from a technical standpoint.

Capabilities to assess the business justification for the maintenance plan and develop data support systems are also important.

The ability to manage the work, maintain the appropriate backlog, and minimize overdue work are also necessary.

The maintenance professional needs to understand the inputs to the work identification phase of a planned work process. Planning, scheduling, reliability, and supply chain management all depend upon the early identification of work to be successful.

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Designed as a Road Map

Resources if you plan to Take the CMRP

One must have "Knowledge" concerning the following:

- Known Maintenance and Reliability Best Practices

- SMRP Body of Knowledge (SMRP Membership Required)

- SMRP Metrics Definitions (SMRP Membership Required)

- SMRP Best Practices (SMRP Membership Required)

- SMRP Global Maintenance and Reliability Indicators
  (SMRP Membership Required)

- GFMAM Asset Management Landscape

- IAM Competency Framework

- ENGINEERING RELIABILITY FAULT TREES AND RELIABILITY BLOCK DIAGRAMS by Harry G.

- Kwatny ADKAR (Book) A Model for Change in Business, Government, and our Community

For more information to help with the CMRP Exam go to www.worldclassmaintenance.org

CMRP Recommended Study Material Downloads

If you plan to Take the CMRP Exam these are my recommendations

Recommendations:

Step 1 –Download "CMRP Candidate Guide for Certification and Recertification" FREE –Does not require membership to download

Step 2 –Join SMRP (www.smrp.org)

Step 3 –Go to www.worldclassmaintenance.organd download the documents under "CMRP Help Information"

Step 3 –Join one of the SMRP Chapters or Special Interest Groups and Participate, meet others and learn from each other

Step 4 –Purchase and Study "Maintenance Best Practices" by Ramesh Gulati and "Maintenance Planning and Scheduling" by

Doc Palmer

Step 5 –Take the practice exam in "Maintenance Best Practices" by Ramesh Gulati, focus on the questions you miss on the exam go

to the chapters where the questions are from and study

Step 6 –Download and Study "GFMAM Asset Management Landscape", IAM Competency Framework, ENGINEERING

RELIABILITY FAULT TREES AND RELIABILITY BLOCK DIAGRAMS by Harry G. Kwatny(www.worldclassmaintenance.org)

Step 7 –Learn what is "ADKAR -a MODEL FOR CHANGE"

Step 8 –Download and Study the following from SMRP Website as a member. (SMRP Body of Knowledge, SMRP Metrics, and SMRP

Best Practices, Global Maintenance and Reliability Indicators)

Step 9 –Join the Slack Group and look for the Certifications Section and ask any questions you want concerning the CMRP Exam

http://upkeep.typeform.com/to/tSeZ9fVx

If you plan to Take the CMRT ....

1st. Download the "CMRT Candidate Guide to Certification and Re-Certification" (FREE) and review all "4 Domains"

2nd. Purchase "Industrial Machinery Repair" (PDF so you can search what you need to know) by Keith Mobley and Ricky Smith and review)

3rd. Take the Exam in the book and score yourself, identify the areas you many be weak in "Industrial Machinery Repair" and study areas you are weak, retest if needed.

SMRP | CMRT
Certified Maintenance & Reliability Technician

SOCIETY OF MAINTENANCE AND RELIABILITY PROFESSIONALS
CERTIFYING ORGANIZATION

CMRT Candidate Guide for
Certification and Re-certification

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Questions/Comments?

Questions? rsmith@worldclassmaintenance.org
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LinkedIn: linkedin.com/company/world-class-maintenance

#1 Software for Maintenance & Reliability Teams

UpKeep is a service-first company that builds software designed to make maintenance easier for technicians and managers everywhere. Reduce downtime up to 18% by switching over to a preventative maintenance solution!

www.upkeep.com

Our Products

UpKeep

Mobile-first maintenance management and collaboration across all location, assets, and teams

"With nearly 340 different machines in our work environment, it's an impossible task to manually assign and track PM's. With UpKeep we can schedule regular maintenance without overlapping tasks with other critical jobs."

★ ★ ★ ★ ★ **Paul D, Health and Safety Coordinator**

edge by UpKeep

An end-to-end solution for remote condition-based monitoring

Connected and secure IoT sensors for real-time remote condition asset monitoring

DATAHUB UpKeep

Integrated & Centralized Data Ecosystem for World Class Asset Operations

The only purpose built Asset Data Platform. Asset Focused ELT Solution for advanced analytics and integrated, real-time asset data.

TMCC THE MAINTENANCE COMMUNITY COALITION

The Maintenance Community Coalition was founded on the belief that working together will benefit everyone within our community

Committed to helping each other thrive in our individual professional journeys by sharing resources and expertise, granting scholarships, hosting events, and unlocking knowledge – always at no cost.