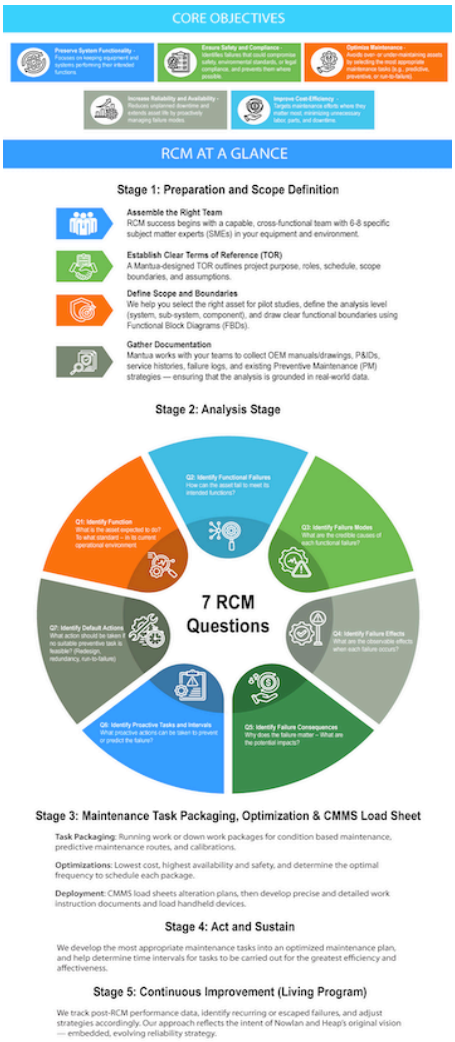
Mantua Group Success Story:
Tire Manufacturing

Company Facts
Overview
- Location – China
- Industry – Manufacturing

Success Highlights
Challenges
- Greenfield Facility
- Reliability at Startup
- Language Barriers
- Skills Gap

Solution
- Isograph RCMCost

Benefits
- Reliability Training Developed
- 1st Quartile Reliability Performance
- Technical Excellence
- Reliability Leadership Developed



THE MANTUA GROUP
ASSET MANAGEMENT AND RELIABILITY

Building a World-Class Reliability-Centric Manufacturing Plant in China

The Business Situation
This case study presents the successful deployment of Reliability Centered Maintenance (RCM) principles in the creation of a greenfield tire manufacturing facility in China. The Mantua Group, joined the project and played a critical role in shaping the reliability culture and technical training framework of the plant, which would go on to become a globally recognized benchmark in asset reliability.

The task was daunting: construct an **$800 million** tire manufacturing facility from the ground up, ensuring that it operated with a reliability-first mindset. The workforce would grow from zero to over **2,000** employees. Compounding the technical and logistical challenges were severe language barriers — technicians and operators spoke only Mandarin, while supervisory and engineering staff, including reliability leadership, spoke only English.

The Solution
The Mantua Group introduced and led the implementation of Reliability Centered Maintenance principles using Isograph's RCMCost software. All critical equipment underwent RCM analysis to determine optimal maintenance frequencies and strategies. This foundation enabled the factory to develop a sustainable and efficient maintenance program aligned with international best practices.

Training Innovation
To address the skills gap and support a reliability-centric operation, The Mantua Group co-developed a comprehensive two-year training program. They coined the new role of 'Reliability Technician' — a multi-craft position blending diverse technical disciplines. Training included:
- Electrical, mechanical, hydraulic, pneumatic systems
- PLCs and automation fundamentals
- Light welding and fabrication
- Precision maintenance, shaft alignment, lubrication, fastener strategy
- Foundational reliability knowledge including RCM and root cause analysis

The Business Impact
The facility exceeded expectations. As production ramped up, the plant was repeatedly reviewed and audited by internal and industry-leading external assessors. The factory earned nearly perfect scores, **ranking in the first quartile** of global tire plants for reliability performance. What began as a linguistic and

cultural challenge was transformed into a case study of technical excellence and strategic maintenance leadership.

This initiative not only established a best-in-class production facility but also proved the global scalability of RCM when combined with strategic workforce development. The Mantua Group's leadership in both the technical and human dimensions of this project was instrumental in its long-term success.