

Australian Code of Practice and ARA Activities

Industry Overview

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Introduction

- ARA activities overview
- Skills and careers
- Level crossings
- CMC management
- CMC activities
- Rollingstock standards

ARA Key Activities

- **North South feasibility study**
- **Future infrastructure requirements**
- **Road rail pricing**
- **Rail research**
- **Regulatory reform**
- **Contractor engagement**
- **Level crossings**
- **Skills and Careers**
- **Disability discrimination act**
- **Freight reform**
- **Passenger transport reform**
- **Communications**
- **Environment**
- **Insurance**
- **Codes and standards recognition**
- **Understanding rail course**
- **Wheel rail interface course**
- **National train safety week**
- **AUSRAIL 2006**

Rail Skills and Careers

- Significant trends:
 - Ageing of the industry
 - Small numbers of young and female workers joining and
 - Small number of young and female workers staying
 - Current rail environment and work practices were attributed directly to driving away young and female workers

Going Forward – 4 Key Themes

- **Attractive Image** – Rail is a modern service industry wanting to create an image that will engage stakeholders, customers and workers of the future. This will be undertaken as targeted and tailored campaigns to deal incrementally with the realistic issues within rail and proactively promote rail's positive attributes
- **Skilling Rail** – With the emergence of rail as a national service industry there is a need to update development processes to suit the changing industry. This will be focussed around the broader concept of capability and challenge the current focus on compliance and time based training.
- **Workplace Relations** – A more contemporary approach is desired to ensure rail realises the potential of it's most valuable asset – people. There is a need to reform existing work practices to attract and retain talent from target groups not traditionally attracted to the rail industry
- **Data Collection** – Reliable and comprehensive industry HR data is desired to ensure a baseline exists and continued performance monitoring is available to track the impact of initiatives undertaken.

National Level Crossing Behavioural Strategy

- ARA managing the development of this Strategy on behalf on the Australian Railway Crossing Strategy Implementation Group (ARCSIG)
- Strategy proposes the national development of Behavioural programs concerning RLX safety, with States pooling funds.
- Currently States develop own programs, often duplicating previous work

National Level Crossing Behavioural Strategy

- Behavioural refers to education and enforcement programs
- Under the Strategy, all states will contribute to the development of education and awareness programs
 - Decreased costs
 - More resources can be allocated to delivery
- The Strategy forms part of the Australian Transport Council's National Railway Level Crossing Safety Strategy

Code Management

- Managed on behalf of industry by the Code Management Company



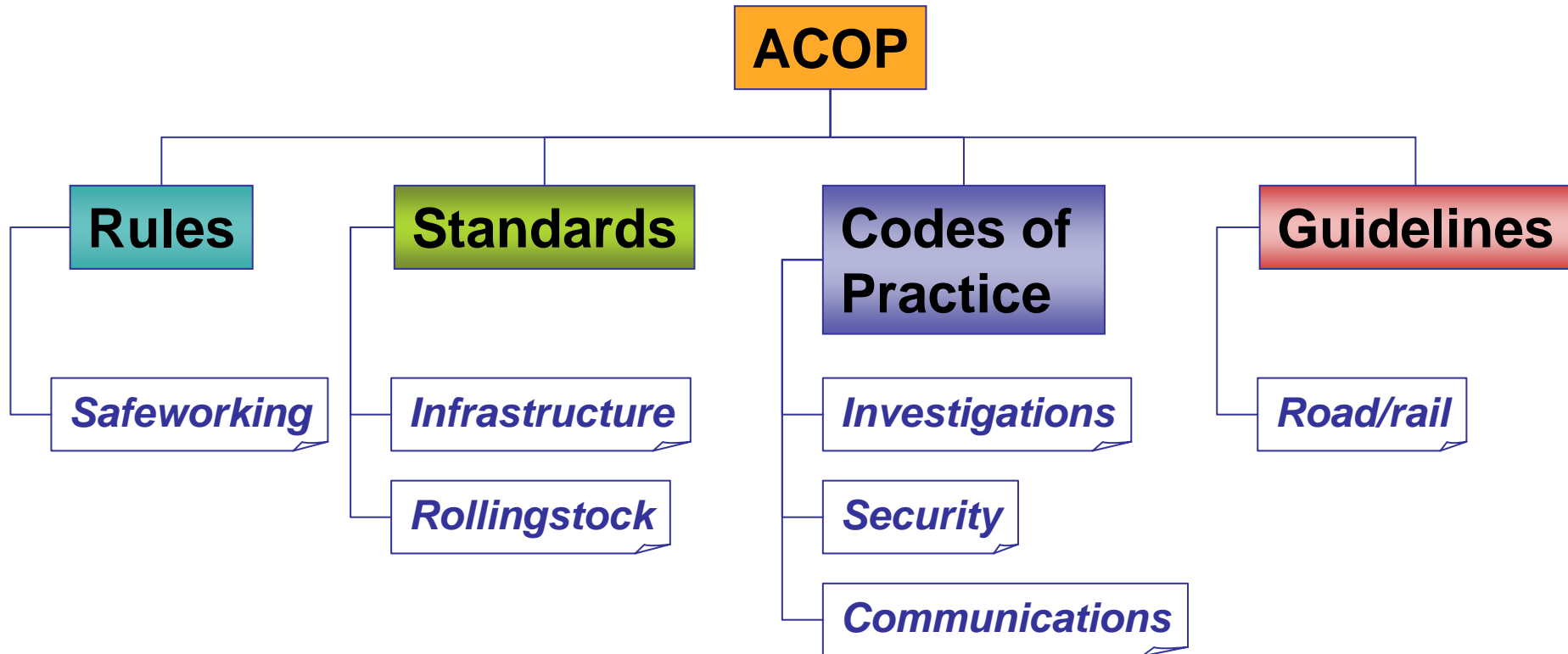
- Wholly owned by the ARA
- Industry component of co-regulation
- Member funded (NTC supplement) non-profit

The old

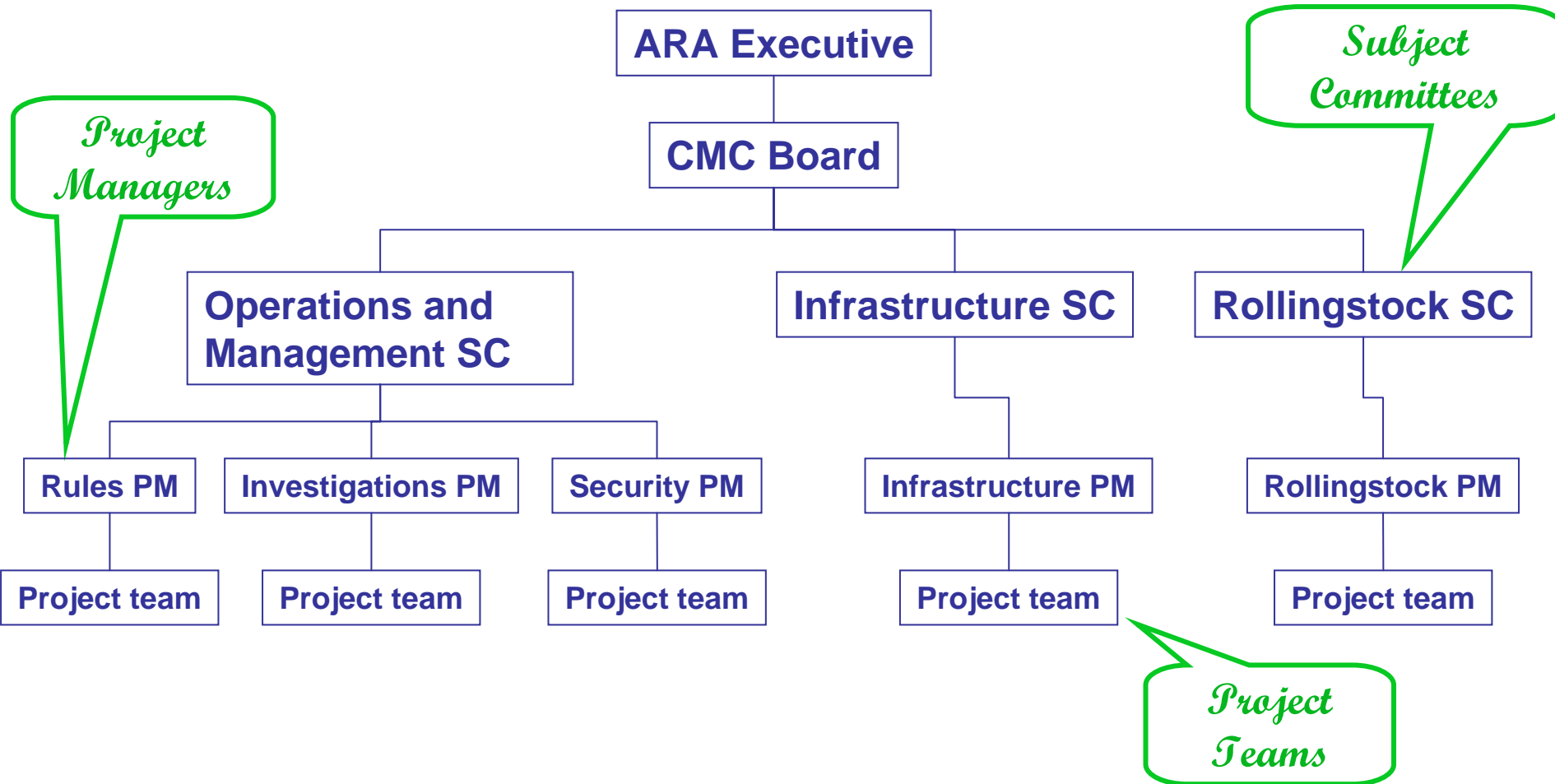
- Code of Practice for the Defined Interstate Rail Network (DIRN) – issued Jan 2003
 - Safeworking rules
 - Infrastructure Code
 - Freight Loading Manual

- Limited application
- Minimum maintenance
- Volume structure – 4 volumes

The new



Management process



Strategy takes shape

- ACOP structure is now firmly entrenched
 - Element approach
 - All development work is aligned to the new structure
 - Development projects to address all key areas of the ACOP
 - Management process established

Elemental structure

- Estimate over 300 elements
 - Rules 50 to 100
 - Rollingstock standards 136
 - Infrastructure standards 100 to 150
 - Codes 10 to 20
 - Guidelines 5 to 10
- Each a document in its own right

Rules development

***Objective:* a suite of rules for national application**

- Joint project with DOI Victoria
- Initial activity – rules for application in Victoria
 - Strong national focus
 - Becomes baseline to develop a set of national rules
 - Initially addresses requirements for Vic, NSW and SA

Rules development

- **Stage 1** (work on track rules)
 - Largely complete for Vic/NSW
 - Further effort required for national adoption
- **Stage 2** (train operating rules)
 - Development during 2006
 - Address national requirement
- Both stages require development of organisational level documentation

Code - Security

- Consistent approach for rail industry security management
- Initial work
 - Security Risk Management in Rail Operations
 - CCTV Systems in Rail Operations

Code - Investigations

- Consistent approach to conduct of investigations
 - Reason model
- Developed in conjunction with DOI Vic
- Approval at May 2006 CMC Board meeting
- Ongoing work to develop common approach to coding of causal factors

- Guidelines for safe operation of road-rail vehicles
 - Involved all principal organisations
 - Guidelines (checklists) developed
 - Design standard requirements identified and forwarded to Rollingstock project
 - Approval at May 2006 CMC Board

- Progressing changes to Volume 4 (DIRN)

- Project planning for ACOP elements
 - Commenced March 2006
 - Hazard identification (hazard tree)
 - Project definition document Jun 06

- Wheel rail committee projects
 - Wheel-rail profile optimisation review
 - Wheel burn causal factors
 - Twist test sensitivity assessment
- Wheel rail interaction course
- Focus groups

➤ 34 major subjects to address for:

- Locomotives
- Passenger cars
- Freight cars
- Track maintenance vehicles

136 elements

➤ Year 1 of a 4 year project

- 32 elements being progressed
- 3 contracted specialist organisations for authoring and validation

Purpose of rolling stock standards

- Registration with track managers
- Procurement and maintenance by operators
- Accreditation with rail safety regulators
- Consistency of assessment by track managers and rail safety regulators
- Potential for operator cost savings by standardisation of equipment and methods
- Increases rail industry knowledge, competence and safety

Previous national rolling stock standards

- **ANZR Manual 1986 (Yellow book)**
Standard gauge interstate freight stock
Superseded by...
- **ROA Manual 1992 (Blue book)**
Standard gauge interstate freight and passenger stock
Still being referenced
- **AS 4292.3-1997**
Railway Safety Management – Rolling Stock
Checklist of rollingstock safety issues.
- **Draft Volume 5 COP 2002**
Applying AS4292 to the DIRN
CMC / ARA has not issued it

Draft Vol.5 COP failings

- **Convolutated development process**

- **Structure made use difficult**

Related subject matter distributed throughout the documents:
Generic r'stock req'ts, Mandatory specific req'ts,
Recommended specific req'ts.

- **Many prescriptive requirements**

Eg. "Brake rigging levers where fitted should be a minimum thickness of 24 mm..."

- **Encyclopaedic approach**

Tried to capture everything. Wordy.

Volume 5

Redevelopment

- ARA's CMC recognised draft Vol.5 unacceptable
- CMC saw a need for up-to-date rollingstock standards covering all of Australia
- CMC wanted more performance-based requirements to allow innovation
- CMC formed a Development Group

Project Statement

Ultimate goal of the project :

The redevelopment of Volume 5 of the COP shall provide the accepted and definitive rolling stock standards for the Australian railway industry (broad, standard and narrow gauge).

Note: Light rail, cane railway and monorail rolling stock are not to be covered (for this project).

Project Objectives

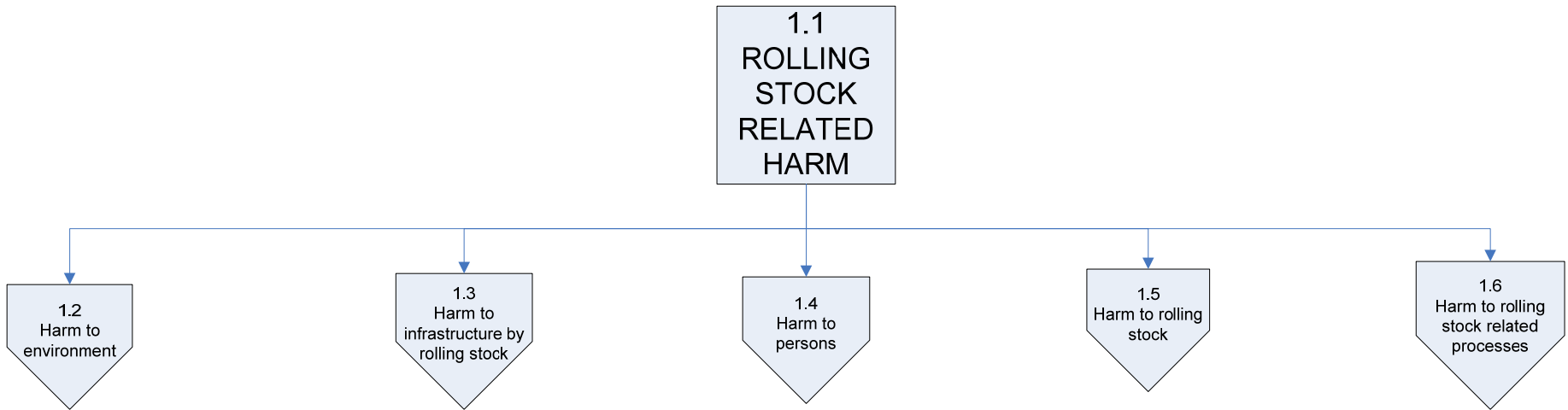
- Get it published as soon as possible
- Use performance-based requirements where appropriate to allow innovation
- Build a document that supports mutual accreditation by track managers and state regulators
- Structure the document to allow it to expand in scope to cover differing railways (risk environments)
- Identify the risks to be controlled
- Make the document more user-friendly
- Obtain acceptance of the document by all stakeholders

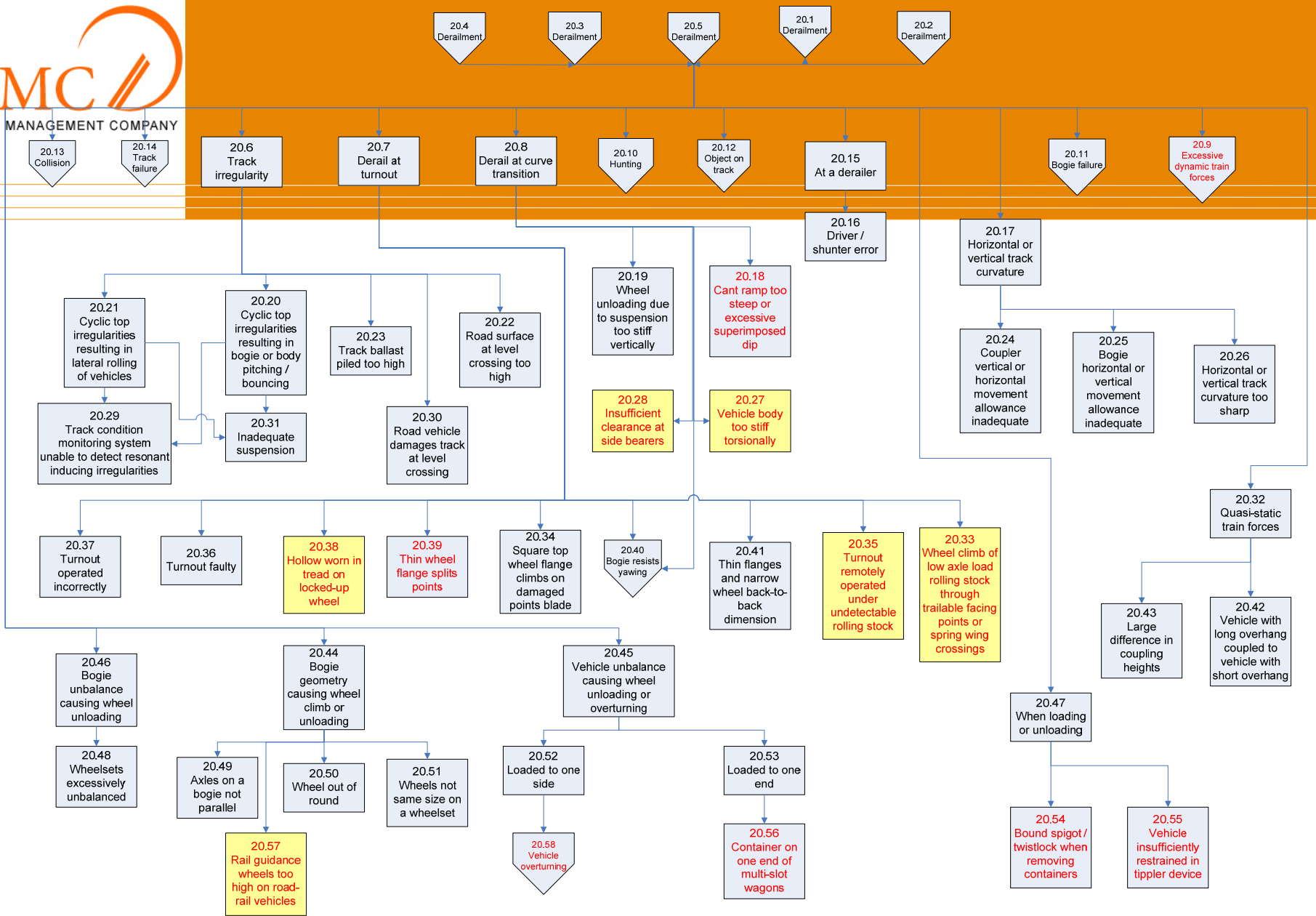
Standards development process

- Drafting
- Development Group review
- Industry review(s)
- Validation
- Approval by CMC & ARA
- Publication

Addressing Risk

- Hazard identification – 48 pages of hazard trees
- Hazard register – over 1000 hazards
- Identify hazards being controlled – a column in each standard
- Independent validation prior to issue





Hazard Register

- Will identify where each hazard is treated within the standards:

Page	No.	Hazard Description - 20/1/06	Roll 05-1 23/11/05	Roll 05-2 23/11/05	Roll 05-3 23/11/05	Roll 05-4 23/11/05	Roll 08-1 30/11/05	Roll 08-2 30/11/05	Roll 08-3 30/11/05	Roll 08-4 30/11/05

Standard's structure

- 34 'Major Elements' (subject areas)
- There are 'Minor Elements' breaking up each Major Element
- Currently have over 290 Minor Elements
- Four versions of each Major Element: 1. Locomotive, 2. Freight, 3. Passenger and 4. Infrastructure Maintenance

Elements being worked on

- **Axles** - being approved for issue
- **Lighting & Visibility** - being validated
- **Signalling Detection Interface** - draft out now
- **Wheelsets** - draft out now
- **Axle bearings** - out early March
- **Track Forces & Stresses** - out early March
- **Wheels** - out end March
- **Dynamic Behaviour** - out end March

Next elements for development

- Rolling stock acceptance
- Rolling stock outlines
- Train safety systems
- Bogie structural requirements
- Access & egress

Standard's requirements

- Interface req'ts define compatible and safe operation
- Design req'ts to at least define minimum level for new vehicles (this can change over time)
- There are shall's (MAN), should's (REC) and supporting info (SUP)
- Checked for quality : verifiable, achievable, unambiguous, appropriate

Compliance

- Non-compliance needs to be handled – history of non-standardisation
- Even new vehicles are likely to have some non-compliance
- Older stock will have greater degree of non-compliance
- Risk assessments are recommended to manage non-compliances

Compliance cont'd

- Spreadsheet format allows standards to be readily used for fleet & process compliance assessment
- Hazard code provides reason for the req't
- T&H operations often have alternative controls that adequately manage the risk, or may not be exposed to certain hazards

Let's look at some standards...

Thankyou