



- Nigel Nixon and Partners- NNP is an international firm of port advisors who work on a wide variety of projects worldwide.
- NNP have been established for over forty years and have built on a reputation as leaders in the field of heavy-duty pavement design. Other expertise extends to market studies, economic analysis, due diligence, planning, design, costing, procurement and implementation.
- In 1994 the company was incorporated in the United States located at its headquarters in Dallas, with representation in U.K., France, Brazil, Caribbean, India and Singapore.
- We are fortunate to secure repeat business with many of our clients and have worked with many of them for most of the time we have been in business.





- An Owner's mission values and their stakeholder requirements have been understood and implemented on numerous NNP projects.
- NNP as a global consultant focuses its vision on cost effectiveness and cost certain delivery at minimal risk to any Owner.
- Our philosophy and mission is to maximise an Owner's best possible return on their investment by focusing on minimizing Owner risk, establishing a best value project and striving at all times for a cost certain deliverable and optimal solution.
- It is through experience in procuring a truly commercially driven solution led by the project's business plan that NNP would be of great benefit to any potential Owner or Bank.
- Many Project Owners have valued the commercial approach and philosophy in project delivery that NNP implements.
- NNP looks to blend its teams wide experience to provide complementary skills to offer a total integrated service.





### Team Leaders

Nigel Nixon Chairman

Kris Kapinos

Chief Executive Officer

Admin & finance

Mark Smallridge President

Mark Smallridge Pavement Lead	Cedric Corbierre  Port Planning and  Equipment Lead	Keith Abraham <i>Project Director &amp;</i> <i>Owner's Representative</i>	Andrew Griffiths Research & Feasibility Lead	Richard Jennings Operations & Funding Specialist	Rodrigo Paiva
David Fanthorpe <i>Paving and Materials</i>	Theirry Thoubans  Port Equipment  Engineer	Martin Mannion <i>Project Manager</i>	Andrew Penfold		
Alessandra Simao <i>Design Co-ordinator</i>		Gordon Ginzel <i>Project Manager</i>	Peter Baker		
Civil, Mechanical, Electrical Designers	Port Equipment Designers	Jabir Benhadjtahieb Project Manager			
Pavements & Civil Engineering	Port Planning	Project Implementation	Market Research	Port Acquisition	Port Economics



## Key Capabilities





## Key Capabilities

#### Pavement Design & Appraisal

- Pavement rehabilitation
- Condition surveys
- Testing
- Computer analysis & evaluation
- Asset management & maintenance
- Expert witness

#### Port Equipment

- Equipment planning
- Procurement
- Condition survey
- Maintenance survey
- Refurbishment
- Wire rope cables
- Structural analysis

#### Economic analysis

- Commercial due diligence
- Feasibility studies
- Investment appraisal
- Traffic forecasting
- Market studies
- Funder representation
- Letter of reliance of authority

#### Key Capabilities

#### Port Development & Investment

- Financing/investment
- Concession/ Lease agreements
- Finance/build/lease
- Equipment and construction procurement
- Site selection

#### Port Operations

- Operations due diligence
- Terminal operating system
- Terminal planning
- Dynamic simulation
- Operational layout
- Equipment and HR analyses (OPEX/CAPEX)
- Business planning

#### Port Infrastructure

• Infrastructure due diligence

- Concept planning
- Back land design
- Yard utilities design
- Yard buildings design
- Detailed design

#### Port Procurement & Implementation

- Construction & project management
- Planning & building consents
- Construction monitoring
- Owner representation
- Cost consultancy



# Project Map









Project management in vertical handling (lifting) and horizontal continuous handling techniques and technology

1. Equipment Planning



2. Procurement





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8. Controls



9. Calculation



Solving problems concerning operation or maintenance of equipment

3. Special Assessment



4. Maintenance Organisation



5. CAMC



6. Refurbishment



7. Cable rope control and expertise

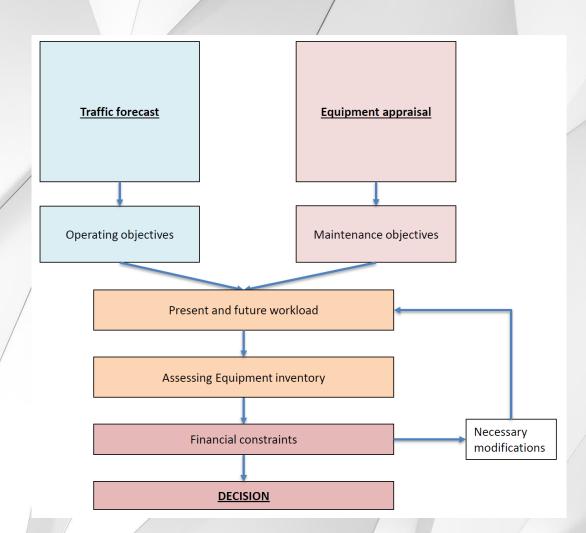




## 1. Equipment Planning 🗐

#### Investment forecasting:

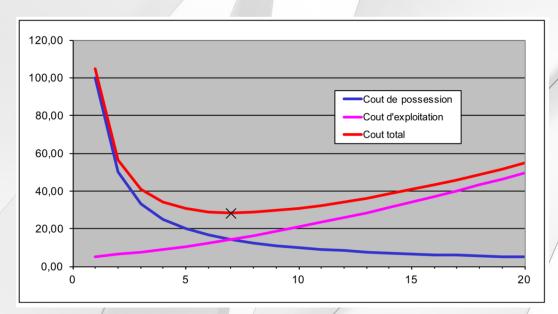
- Traffic Forecast
- Equipment Appraisal (General condition, durability, maintenance and operating costs)
- Economic design life



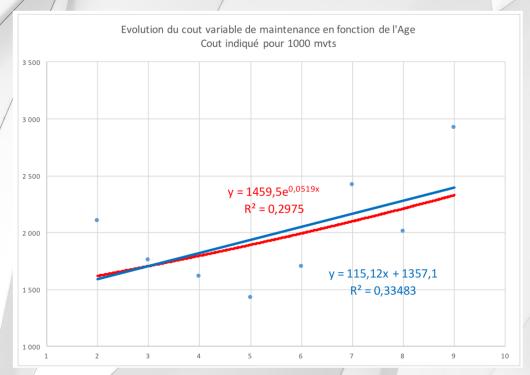


## 1. Equipment Planning

#### **Economic Life**



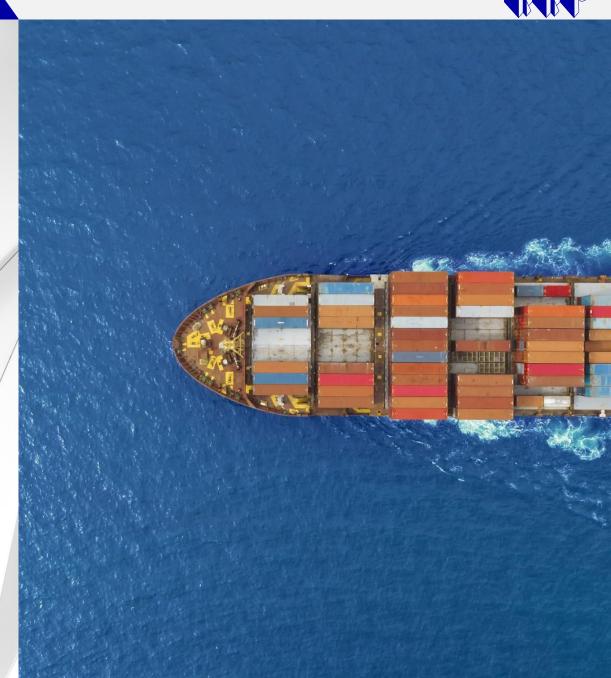
# Maintenance cost vs. age of equipment





# 2. Procurement

- Functional need analysis: establish the bases of the project (capacity, size)
- Prepare tenders: technical, administrative, selection rules
- Call for tenders: respond to the contractor questions
- Choosing the contractor: the best economical/technical competence is the basis of selection
- Project control: engineering, construction, assembly
- Commissioning: full testing of the delivered items
- Punchlist, follow-up and assistance during warranty period





## 3. Condition Survey



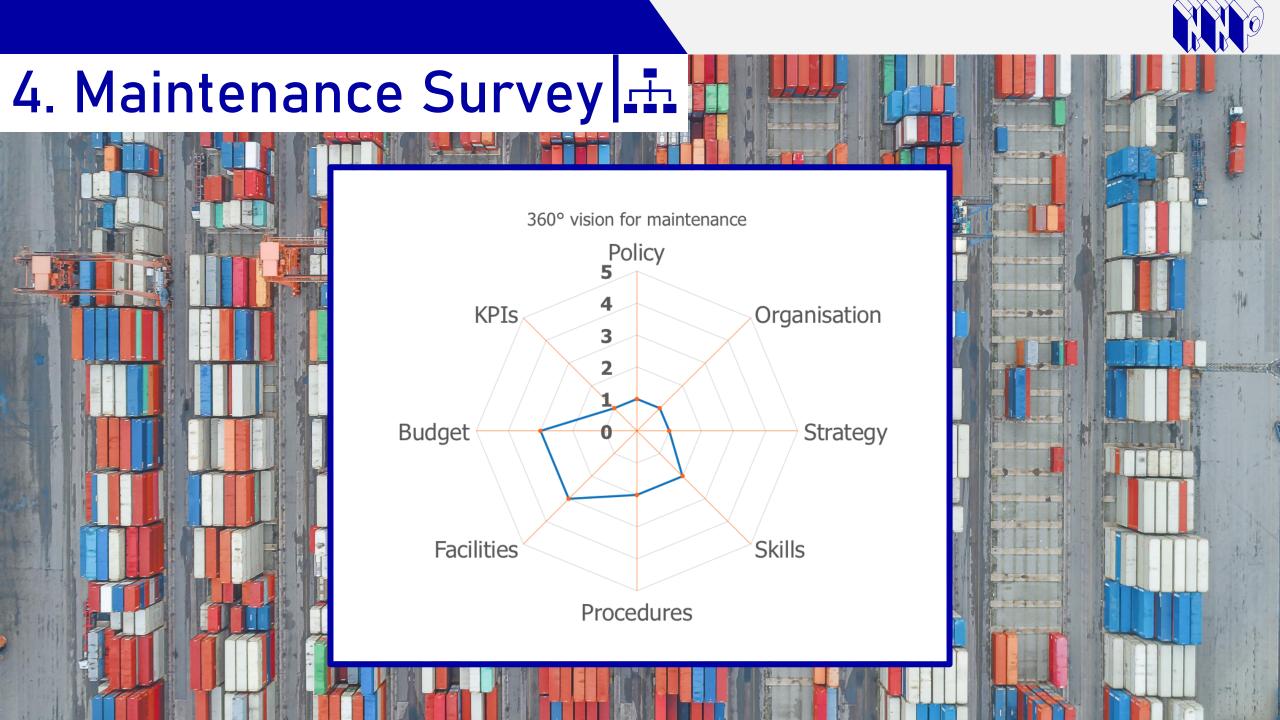
#### Based on:

- ISO 12482 standard: Cranes- Monitoring for crane design working period Our specific methodology uses:
- ISO 12100 standard: Safety of machinery, general principles, risk assessment and risk reduction
- 12349-1 standard: Safety of machinery, safety-related parts of control systems, Part 1: General principles for design

The objective is to improve the safety of old equipment.

- 1. Define the residual life of equipment (fatigue evaluation)
- 2. Identify and appraise the level of risk due to the failure of critical elements
- 3. Prevent the failure of critical elements

This method can also be applied to new equipment.



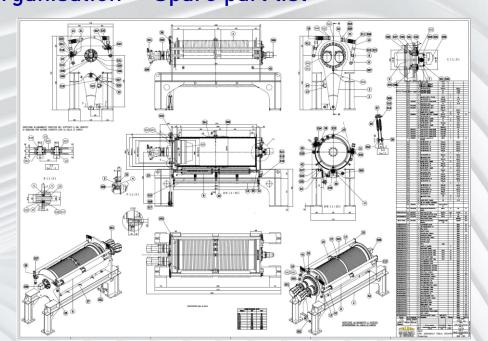
## 5. CAMC $\Box$

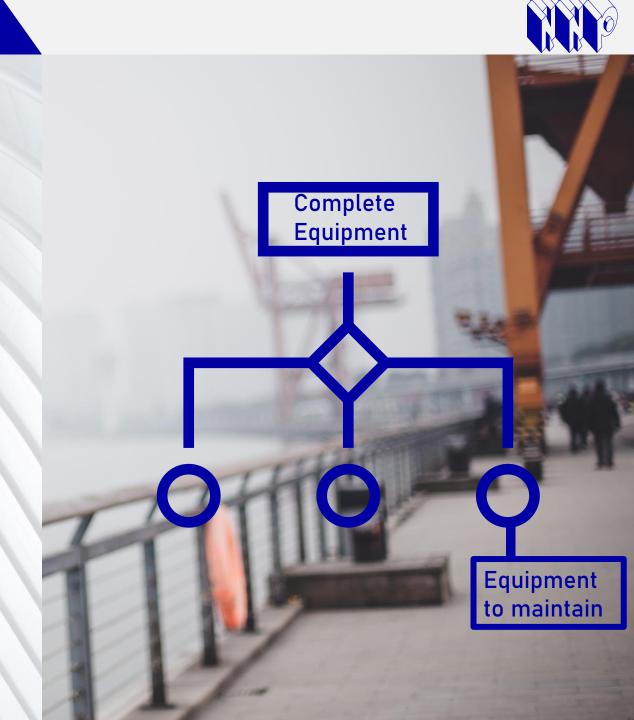
- Computer Assistance Maintenance Control
- Technical assistance for:
  - Implementing new software
  - Building the necessary data base

Tree inventory organisation

Technical sheetSpare part list

Maintenance procedures











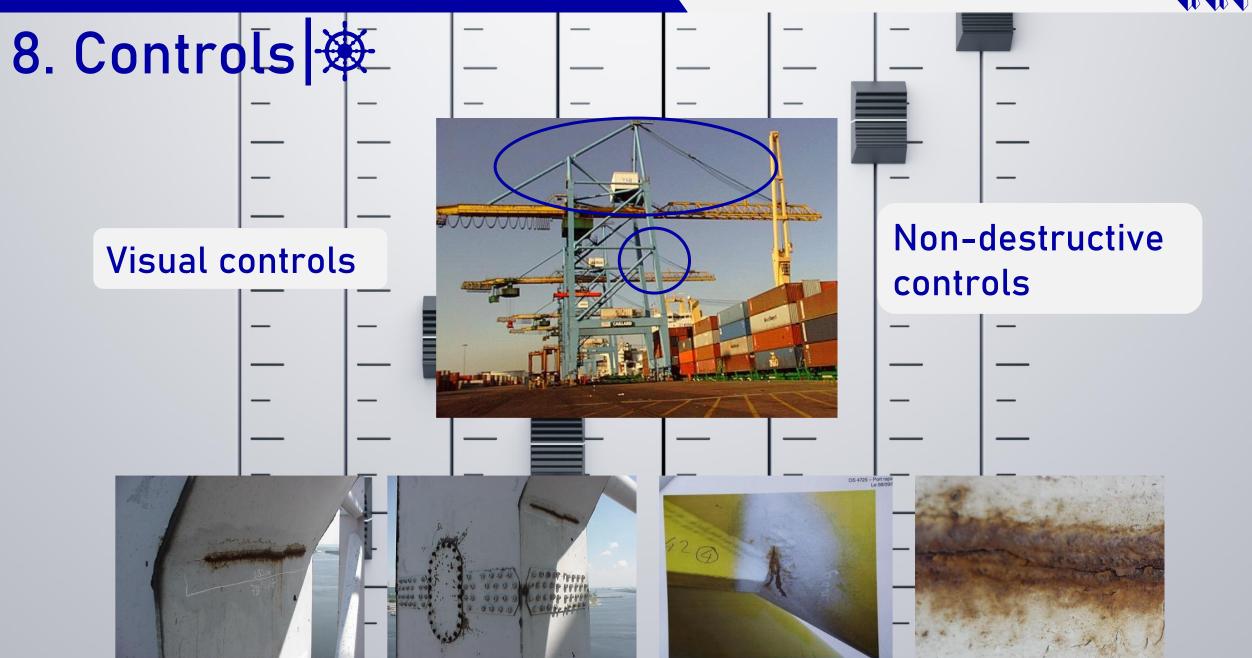
# 7. Wire Rope Cable 💉



Control and follow-up

Assistance for cable selection







# 9. Structural Analysis

