

Working Group 32

Report 111-2010

**The World Association for
Waterborne Transport Infrastructure**



**Presentation by
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Jim McCarville**

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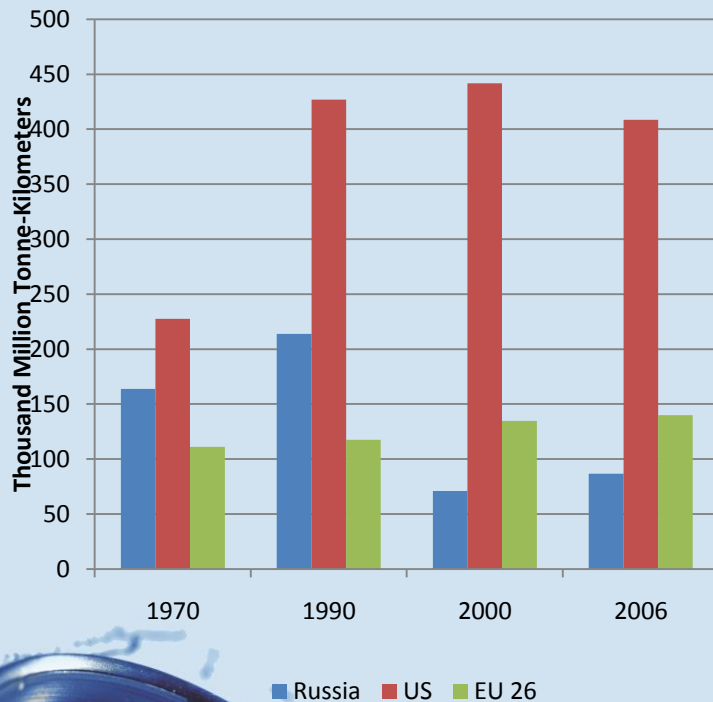
Outline

- General Facts on Waterways
- PIANC
- PIANC Working Group 32 History
- Performance Measure framework
- Inland Waterway Performance Measures
- Final Thoughts



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Waterway Usage- Russia, Europe and U.S., 1970-2006



	Waterway Kilometers	Share
China	110,000	18%
Russia	102,000	16%
Brazil	50,000	8%
United States	41,009	7%
Indonesia	21,579	3%
Colombia	18,000	3%
Vietnam	17,702	3%
European Average	52,332	8%

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Some Recent US Studies Crossing Multimodal Tradeoffs

- Black Warrior Tenn-Tom Waterway System
- Minnesota Bridge Collapse
- Business Realignment Estimates - FHWA
- (NCHRP) Report 586: Rail Freight Solutions to Roadway Congestion
- Lock and Dam Closures
 - Chickamauga Locks
 - Emsworth, Dashields, and Montgomery
- Marine Highway Program



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Closures Cost Money!

NETS (IWR-USACE)

- Greenup 2003 Closure (52 days)- \$42 Million
- Hannibal Locks 2005 Closure (5 days)-\$5 Million
- Lock 27 Closures
 - (August 2007)-\$3.9 Million
 - (Oct 2005-Feb 2006)- \$2.7 Million
- McAlpine (August 2004)-\$6.3 million

GLOBAL Insight – Upper Miss 90 Day Closure

- \$118.6 million for Waterway freight
- \$482.8 million by rail
- \$1.50 billion by truck



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Technology Can Help Promote the Waterway Industry

- Demonstrate Economic Importance
- Demonstrate Waterways Reliability
- Improve Safety and Emergency Response
- Equipment management
- Use Better Information to Manage and Gauge System effects of closures



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What is PIANC?

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What PIANC Stands For

The global organisation providing guidance for sustainable waterborne transport infrastructure for ports and waterways

- PIANC is the forum where professionals from around the world join forces to provide expert advice on cost-effective, reliable and sustainable infrastructure to facilitate the growth of waterborne transport.
- Established in 1885, PIANC is the longest-standing organisation in its field, and continues to be the leading partner for governments and private sector in the design, development and maintenance of ports, waterways and coastal areas.



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PIANC's Mission

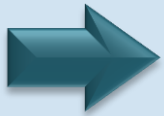
To remain the leading international source of waterborne transport-related information in the 21st century

- To provide expert guidance and technical advice
 - Bringing together the best international experts, both public and private, on technical, economic and environmental issues pertaining to waterborne transport infrastructure
 - High-quality **Technical Reports**
 - International **Commissions and Working Groups**
- To keep the international waterborne transport community connected
 - Four-yearly **International Congresses**
 - Four-yearly **PIANC-COPEDEC International Conferences on Coastal and Port Engineering in Developing Countries**
 - Quarterly magazine **'On Course'**
 - E-Newsletter **'Sailing Ahead'**
 - Our website: www.pianc.org
- To support Young Professionals and Countries in Transition

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Waterborne transport, a vital solution for today

A powerhouse for the world economy



Waterborne transport depends on the quality of its infrastructure. PIANC is the only global organisation providing guidance for the development of reliable and cost-effective infrastructure for waterborne transport.

An unrivalled environmental footprint



Today, waterborne transport offers the most sustainable options for freight transport worldwide. PIANC greatly contributes to this from an infrastructural point of view.

Putting safety first



PIANC actively promotes a common technical culture of coastal engineering through its international Working Groups.

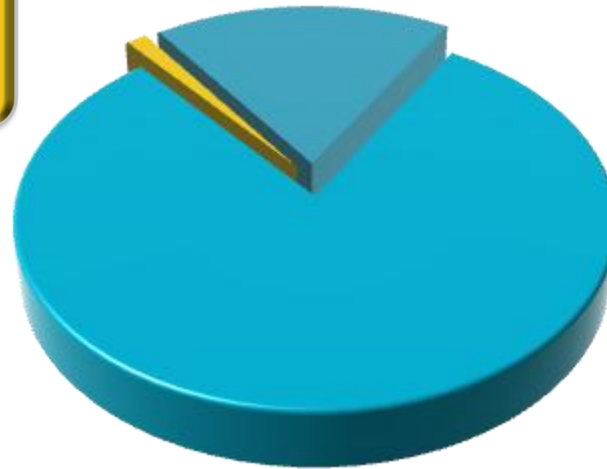


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PIANC's Membership

**More than 30
Qualifying Members**
(i.e. governmental and
non-governmental organisations
representing a country)

**More than 450
Corporate Members**
(port authorities, chambers of
commerce, universities, other
public- and private-sector
organisations)
and 5 Platinum Partners



**More than 2,000
Individual Members**
(professionals and students included)

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How PIANC work

- **MANAGEMENT**

Annual General Assembly: *1 meeting per year (May)*

2011 : Berlin (Germany)

2012 : Spain

2013 : Marseille (France)

2014 : San Francisco (USA)

- * Delegations of all Qualifying Members represented
- * Highest decision power.

Council : *1 meeting per year (May)*

- * First Delegates and ExCom members.

ExCom : *3 meetings per year (February, May, October)*

- * President, Secretary-General, 4 Vice-Presidents, Commission Chairpersons



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How PIANC works

- **Our Commissions and Working Groups reflect the unique variety of topics and issues covered by PIANC**
 - **4** commissions for technical and scientific activities, focusing on: **inland navigation, maritime navigation, recreational navigation and environmental matters.**
 - **1** commission for **international co-operation and relations with Countries in Transition.**
 - Commissions execute PIANC's Strategic Plan, co-ordinate the work of our technical Working Groups, and provide reference information for conferences and publications.
 - Participation open to delegates from each member country.
 - **Specific commission (YP-Com) - create an international network of Young Professionals**



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PIANC Working Group 32 History



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Terms of Reference

- Reflect the critical success factors
- Improve the overall performance of inland waterway navigation (IWN)
- Set common definitions, standards, and measurements
- Encourage industry-wide adoption
- Increase attractiveness for users
- Technical and non-technical performance criteria
- Evaluation of the elements
- Development of a list of criteria or indicators for each element to validate
- Determination of an assessment method to rank



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Objectives of WG32

- Intermodal applicability
- Comparability with other transport modes
- Performance measurement system appropriate for all kind of inland waterways
- Standardized approach (reference model)
- Internationally accepted and applied guidelines
- Standard reference document used by national administrations



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InCom WG 32 -Performance Indicators for Inland Waterways Transport

- September 2007
 - Official start of WG 32
- September 2007
 - Basic study of Performance Indicators
 - General introduction and fundamental theories
- September 2008
 - Intermediate Report
- January 2009
 - New structuring of the contents Elaboration of the Manual
- February 2010
 - Completion of the Final Report Manual on Performance Indicators for Inland Waterways Transport
- August 2010
 - Released Final report



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Members

- Reinhard Pfliegl, Chairman
- Member countries
 - Austria, Belgium, France, Germany, The Netherlands, U.S.



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Performance Indicators shall...

- Affect strategic, tactical and operational planning and control
- Play an important role in setting goals, evaluating performance and determining future course of action
- Identify an organization's success
- Analyze whether customer's and stakeholder's needs are met



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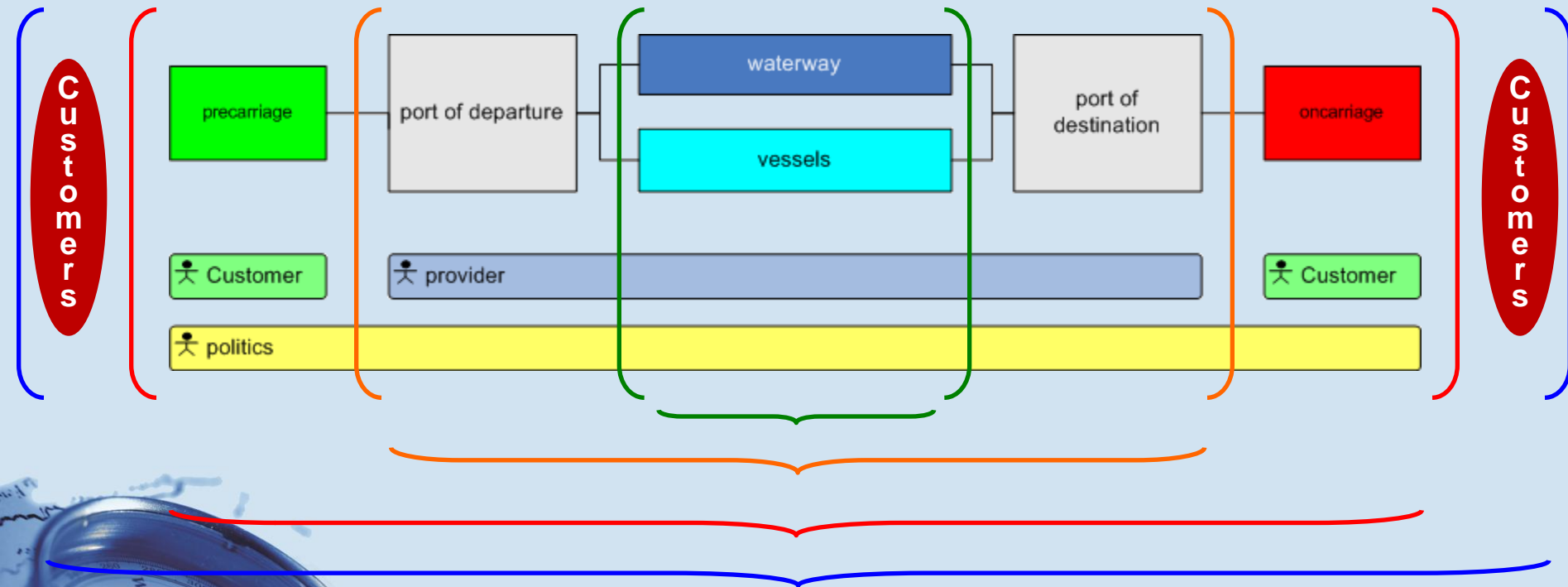
6 Steps to Define Performance Indicators

- Particularise the necessary basic data
- Recommend a potential data source
- Describe the calculation method
- Explain the measurement unit
- Suggest a collection regularity
- Define an objective



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Performance indicators within the supply chain



Scope of indicators

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Report 111-2010 Details



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Area of application ID	Name of the Area of Application												
Performance indicator ID	Name of the performance indicator												
Description	Detailed description of the provided information												
Calculation	Formula that describes how to calculate the performance indicator												
Terms	Definition of terms which are used within the formulas												
Information	Additional information that is necessary for deeper understanding												
Measure	Measurement unit in words												
Collection	365												Daily
	52												Weekly
	1	2	3	4	5	6	7	8	9	10	11	12	Monthly
	1			2			3			4			Quarterly
	1						2						Semi-annually
	1												Annually
Objective	What is the objective that is followed by this performance indicator												
Comment	Further information or comment on the performance indicator												
Complexity	Indicates the level of implementation corresponding to the level of complexity of the recommended PI. It is therefore differentiated in three categories:												
	Level 1					Level 2				Level 3			
Application	Indicates the recommended application of the PI within three categories:												
	Operation					Information				Reference			

Areas of Application

1. Infrastructure
2. Ports
3. Environment
4. Fleet and Vehicles
5. Cargo and Passengers
6. Information and Communication
7. Economic Development
8. Safety
9. Security



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1. Infrastructure

- Availability of Locks
- Lock Utilization
- Availability of Core Waterway Infrastructure
- Capacity of Waterway section
- Dredging/Maintenance of waterway



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2. Ports

- Handling Capacity
- Storage Capacity Utilization
- Waiting time for service
- Utilization of handling capacity



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3. Environment

- Fuel Consumption
- Emission Air
- Emission Noise
- Water Quality
- Construction and Maintenance



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4. Fleet and Vehicles

- Maintenance, service, operating supplies
- Capacity



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5. Cargo and Passengers

- Cargo Transport
- Passenger Traffic
- Perceived quality/user satisfaction with cargo and passenger transport



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6. Information and Communication Technology

- RIS Coverage
- Frequency of updating electronic fairway charts
- Availability of electronic freight markets/freight exchange
- Accuracy of electronic fairway charts
- Availability of electronic fairway information
- Accuracy of AIS/tracking & Tracing
- Availability of electronic reporting
- Availability of port information system within specific waterway regime



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7. Economic Development

- Employment
- Inland Waterway transport volume compared to gross domestic product
- Economic impact of passenger and cargo transport
- Regional and local development



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8. Safety

- Injuries, fatalities, material damages
- Accidents
- Economic impact of accidents



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9. Security

- Thefts
- Access Control



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Final Thoughts

- WG focus is on public and private sector who may not be “aware” of inland water
- Designed to show SMART indicators
- Focus on comparability with other modes
- Usefulness to US Section



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Thank you

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Smartrivers

Sept 13-16, 2011
New Orleans, LA
Call for Abstracts out now



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