



*Developing Infrastructure and Operating Models for Intermodal Shift*

## ***THE IMPACT ON INFRASTRUCTURE OF THE GROWTH IN DOMESTIC COMBINED TRANSPORT***

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# UIC Combined Transport Group (CTG) Study about Infrastructure Capacity Reserves 2015

- This investigation comprehensively examined if the capacity of rail network and intermodal terminals in Europe will be sufficient to absorb the growth of international combined transport by the year 2015.
- Published in June 2004, the full report can be downloaded from the UIC website <http://www.uic.asso.fr/tc/Study-on-capacity-reserve.html>
- The project was initiated and financed by the UIC (Union Internationale des Chemins de Fer), with the participation of the UIRR (Union Internationale des Sociétés de Transport Combiné Rail-Route).
- This partnership reflects the joint concern for maintaining an optimum development of this exciting transport mode.
- The study was carried out by the following team of consultants:
  - Kessel & Partner Transport Consultants, Freiburg
  - KombiConsult GmbH, Frankfurt am Main
  - MVA, Paris

# UIC Combined Transport Group (CTG) Study about Infrastructure Capacity Reserves 2015:

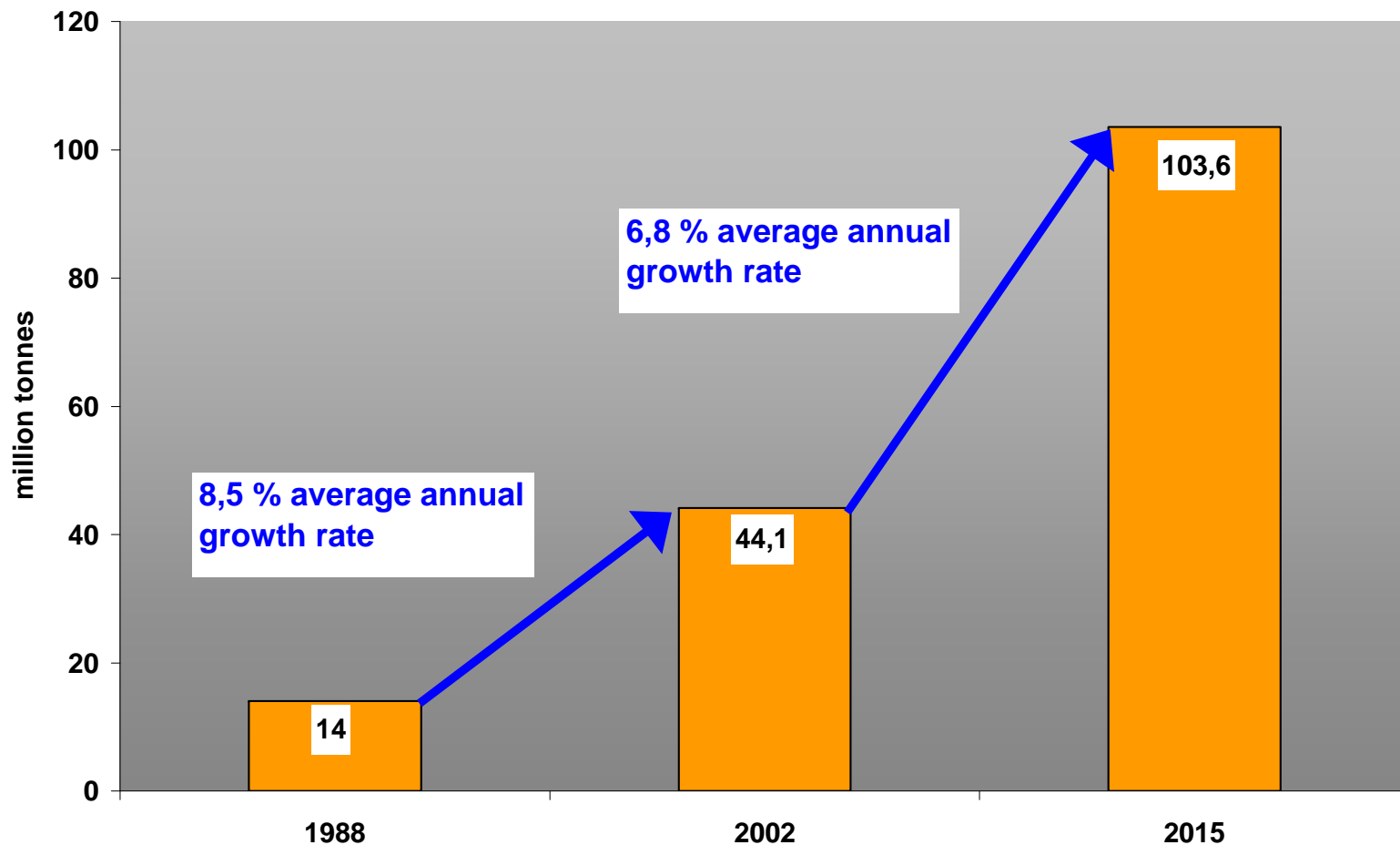
## Trans-European reference corridors of the Study

Corridor		Via...
1	Benelux, Germany, Switzerland, Italy	
2	Benelux, France, Switzerland, Italy	Bettembourg/Athus, Metz, Basel
3	Benelux, France, Italy	Bettembourg/Athus, Metz, Modane
4	Benelux, France, Italy	Paris, Modane
5	Scandinavia, Germany, Austria Italy	
6	Germany, Poland	
7	Benelux, Germany, Czech Republic, Slovakian Republic	
8	Benelux, France, Spain	Paris, Bordeaux, Hendaye
9	Benelux, France, Spain	Paris, Dijon, Lyon, Cerbère
10	Germany, France, Spain, Portugal	Cerbère and Hendaye
11	France, Germany, Austria, Hungary	Le Havre/Forbach or Paris/ Basel
12	France, Hungary	Switzerland
13	United Kingdom, France, Spain	Cerbère or Hendaye
14	United Kingdom, France, Germany, Austria, Hungary	Calais, Metz or Forbach
15	United Kingdom, France, Italy	Paris or Metz or Modane
16	United Kingdom, France, Switzerland, Italy	Metz, Strasbourg or Basel
17	United Kingdom, France, Belgium, Germany, Switzerland, Italy	
18	Italy, France, Spain	Modane or Ventimiglia/ Cerbère or Hendaye

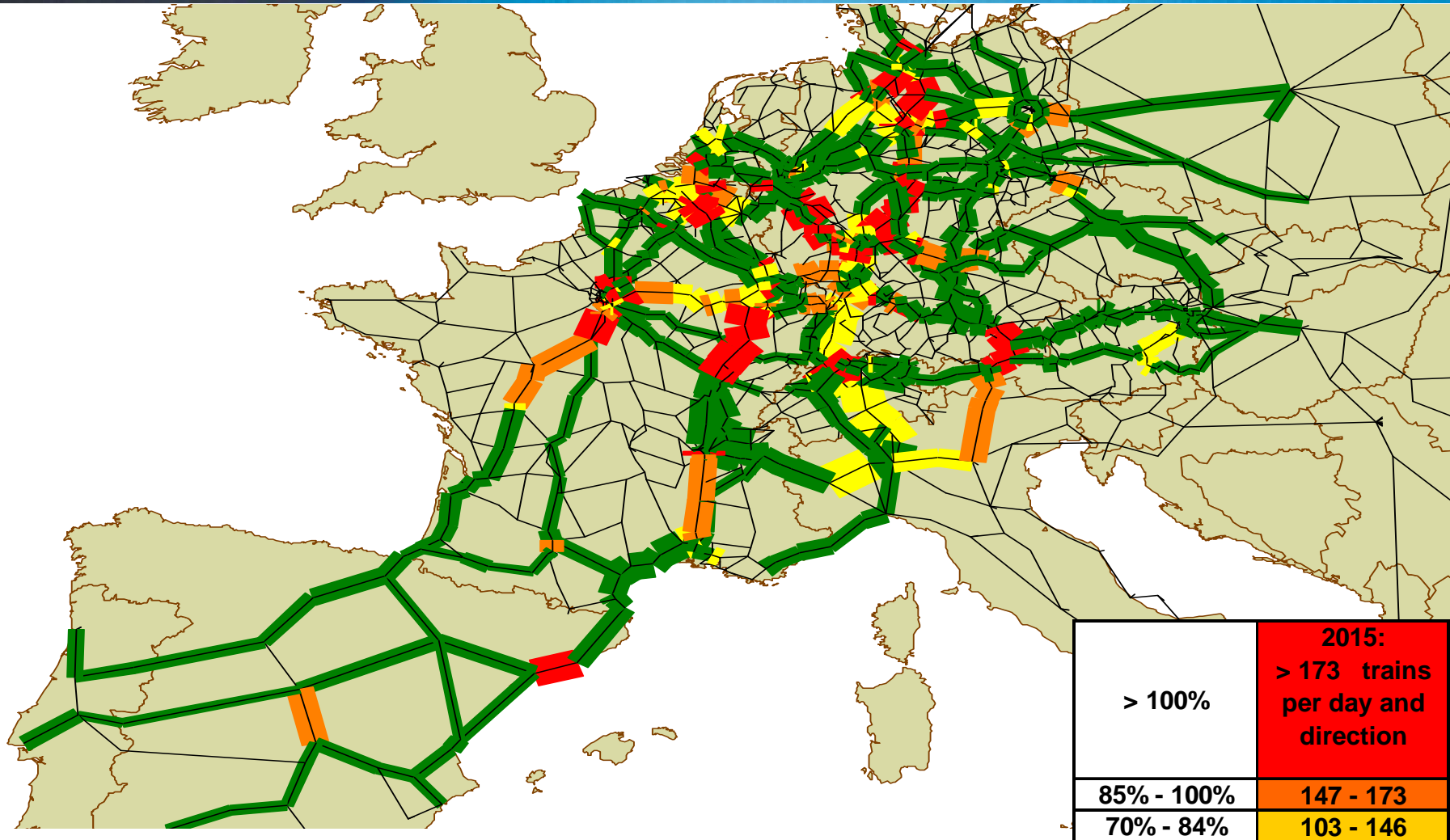
# Main Basic Assumptions of the Study

- Sustained growth of International Combined Transport (ICT) on **all** corridors
- Growth differentiated per corridor but average growth for Unaccompanied ICT estimated at **6,8 %** per year (**less** than historical growth of CT)
- Which means **+ 113% 2015/2002** (+ 134,92 % for Unaccompanied International Combined Transport and + 19% for Accompanied ICT)
- Increase of the number of **Conventional** Freight Trains by **25%**
- Increase of **20%** of the productivity in the use of the Infrastructure by Freight trains:
  - 750 m/ 1 500 Gross Tons on all corridors studied
  - 80% use of the available length
  - Internationally integrated railway paths
  - Return of quality of service to normal levels (85/90% punctuality)
- **All** identified Infrastructure projects have been implemented by 2015
- Severe Railway Infrastructure saturation is shown, requiring far reaching boundary crossing actions in terms of investments in rail and terminal infrastructure, technical-operational improvements, working procedures between all stakeholders of CT
- With the network effect, the problematic of the central European network impacts **all** European related flows, including South Eastern Europe and Asia Minor

# UIC Combined Transport Group (CTG) Study about Infrastructure Capacity Reserves 2015 : Growth Projections (International non accompanied Combined Transport)



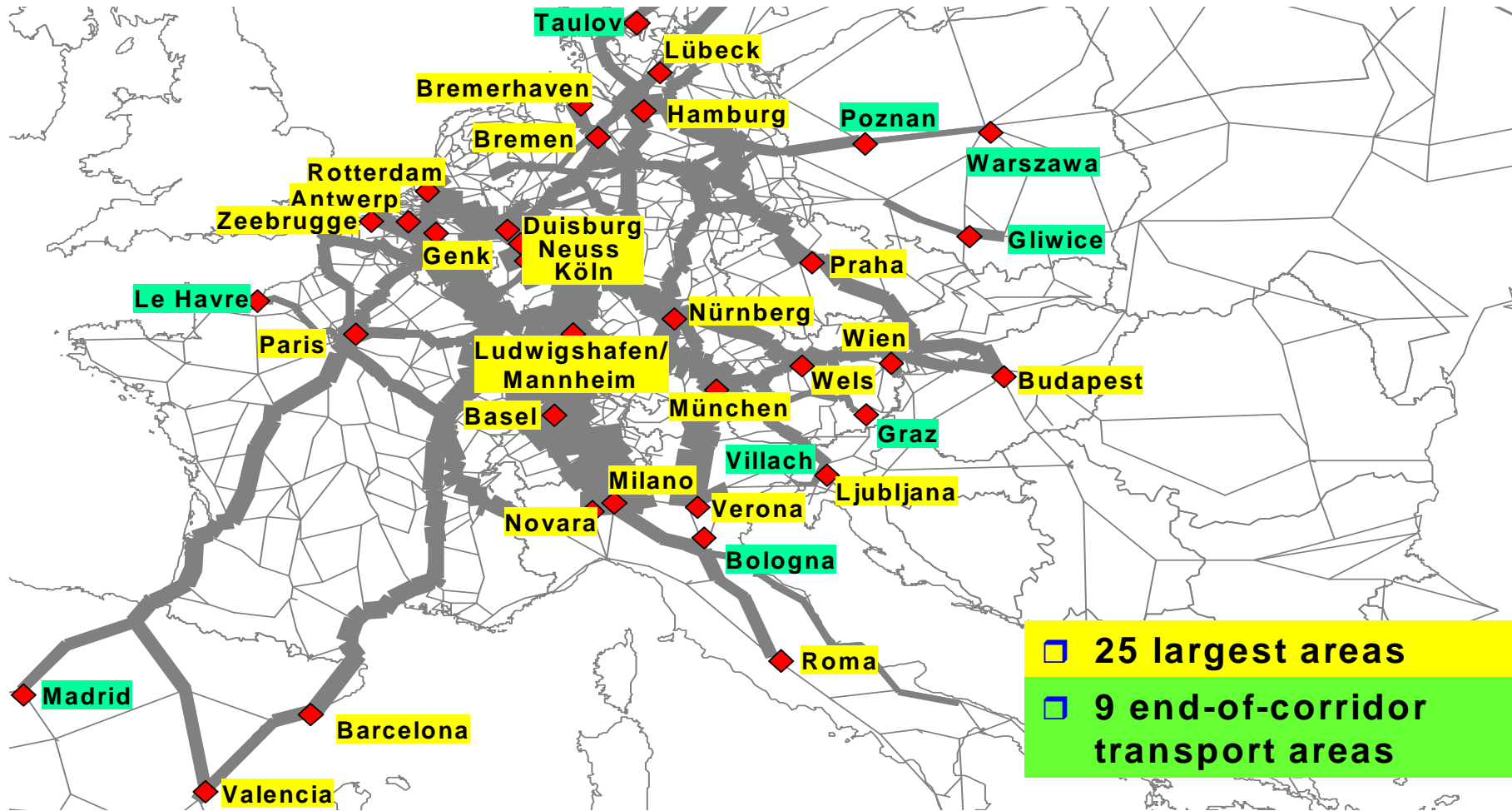
# Utilisation rate of the Railway Infrastructure in 2015 after consideration of planned enlargement investments



# Main International Rail Lines of Route with Bottlenecks by 2015

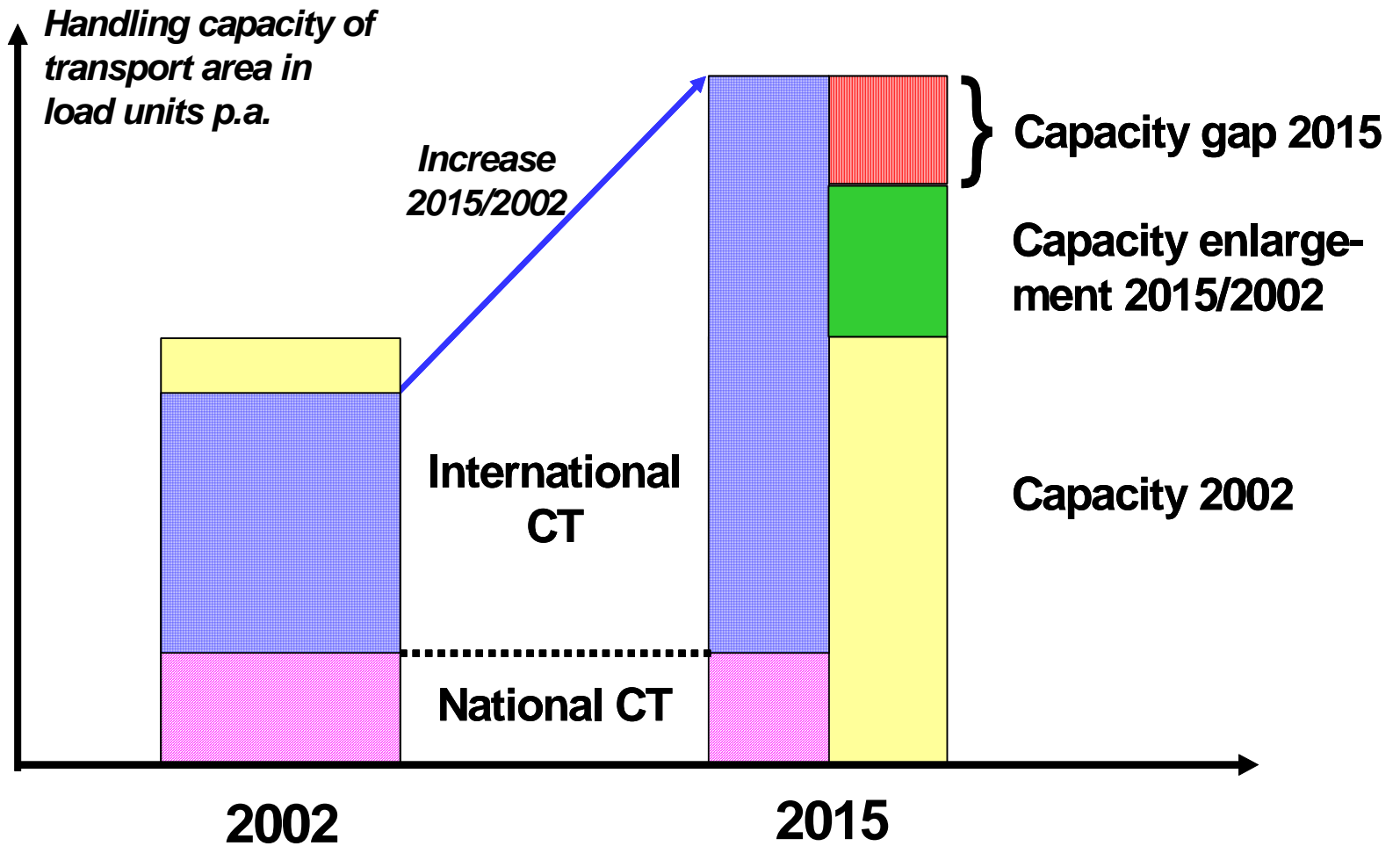
Country	Main Lines of Route with bottlenecks
Germany	Hamburg – Rhein/Main
	Köln – Rhein/Main
	Saarbrücken – Stuttgart
France	Metz – Dijon
	Lyon – Avignon
	Paris – Orléans – Tours
Belgium	Freight corridors from/to Antwerp
Switzerland	Greater Basel area
Spain	Barcelona-Tarragona

# Top 25 transport areas by 2015 for international CT





# The Terminals : Capacity Gap 2015 (Inland Terminals)



# What to do about it : DIOMIS

## Key Actions and Objectives

- In 4 domains :
  - Railway Network Management
  - Railway Operations Management
  - Terminal Management
  - Accompanying Actions
- With the objective of :
  - Achieving the productivity gains underlying the conclusions of the Study
  - Encouraging new types of cooperation between all stakeholders in CT
  - Describing and helping to implement optimal capacity management models at terminal level
  - Adapting and improving more effective operating practices in terms of railway operation
  - Describing the benefits of an international approach towards planning and production
  - Integrating the assessments of the IMs
  - Learning to grow Rail Freight traffics on a constrained railway infrastructure
- An ultimate deliverable scheduled for December 2007 : **the *DIOMIS CT MASTER PLAN 2015***
- Budget financed by UIC
- Work started on January 23rd 2006
- The DIOMIS project is documented (objectives, workshops, press releases, reports, etc,...) on the Internet site : <http://www.uic.asso.fr/diomis>

# DIOMIS Project : Status

## Status of the current modules

Module	Started	Planned Completion
A1 Trends in Domestic CT	February 2006	October 2006 ( <i>report available, workshop 1/2/2007</i> )
A5 Improving the Use of the Available Train Capacity	January 2006	June 2006 ( <i>report available, workshop 12/10/2006</i> )
A11 Report on CT in Europe	April 2006	September 2006 ( <i>report available</i> )
A4 Best Practices in Terminal Management	July 2006	December 2006

## Other Modules starting in 2006

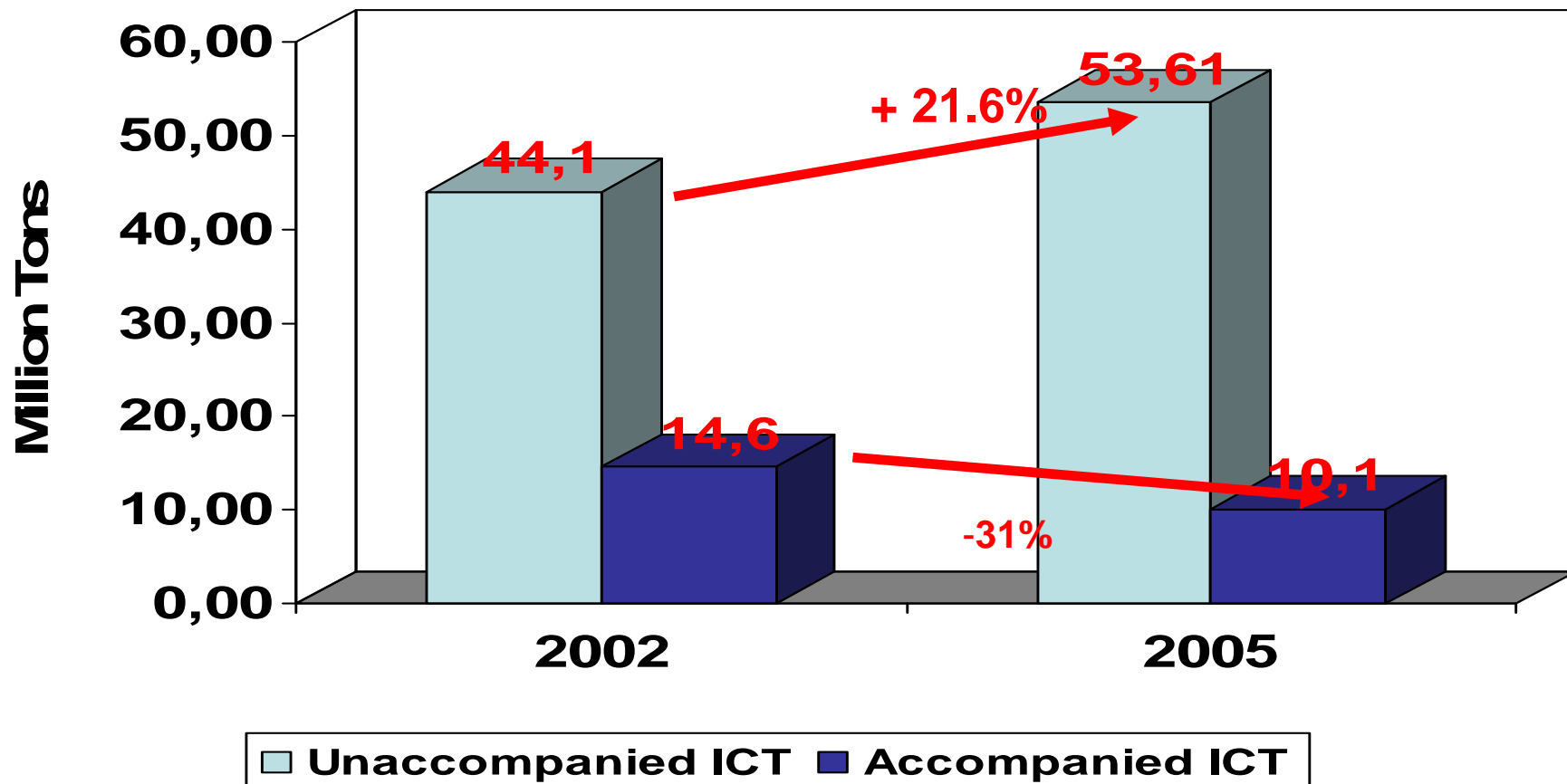
Module	To start in	Planned Completion
A7 ICT Production (Long & Heavy Trains,...)	October 2006	May 2007

## Modules starting in 2007

Module	To start in	Planned Completion
A8 International Coordination of Terminals	February 2007	June 2007
A9 Opportunity Costs NACT vs ACT	May 2007	August 2007
A10 Wagon Technology	July 2007	October 2007
A12 CT Master Plan 2015	August 2007	December 2007

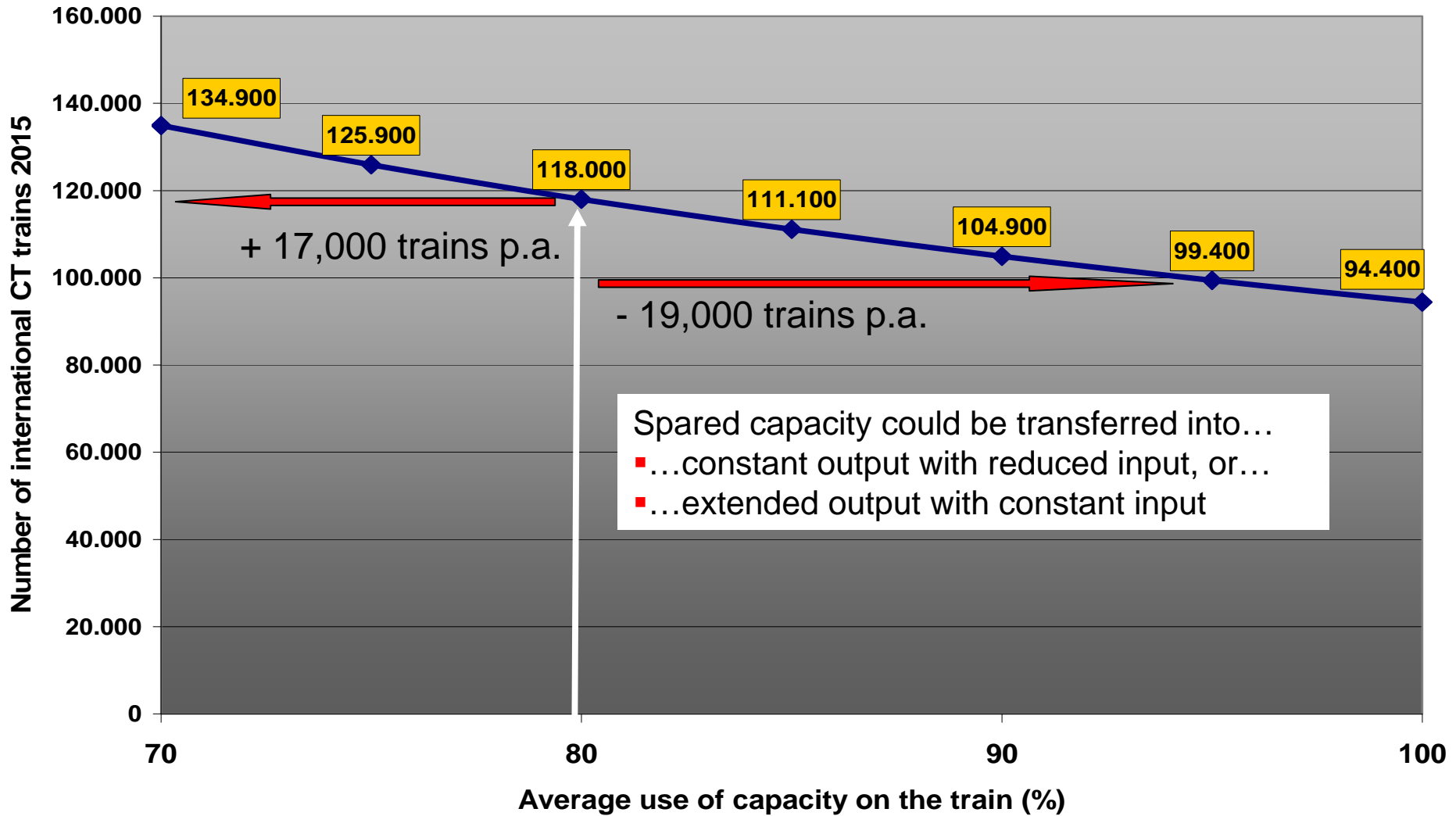
# Intermediary Check : the situation of ICT in 2005

## First results : confirmation that the trend has set in !



Confirmation of the projections made in 2004

# DIOMIS: First results : optimal use of existing train capacity, the impact on the rail network



# DIOMIS :

## What is expected from the IMs with regard to the aims of the project ?

- Acknowledge the main bottlenecks
- Assess the Infra measures proposed
- Assess the cost of relieving the bottlenecks
- Common understanding of the infrastructure requirements
- Awareness of the urgency of the problem
- Integrated international approach for planning the train paths
- Long(er) trains : at least 750 m on the selected corridors
- Review the priorities between Freight and Passenger trains
- ....and many others !

# Rate of the Use of Railway Infrastructure Preview 2015 with inclusion of the impact of Domestic CT

