

Welcome



Nick Walker (DESY)

EUROTeV Meeting

Orsay

16.05.2006

Where are we?

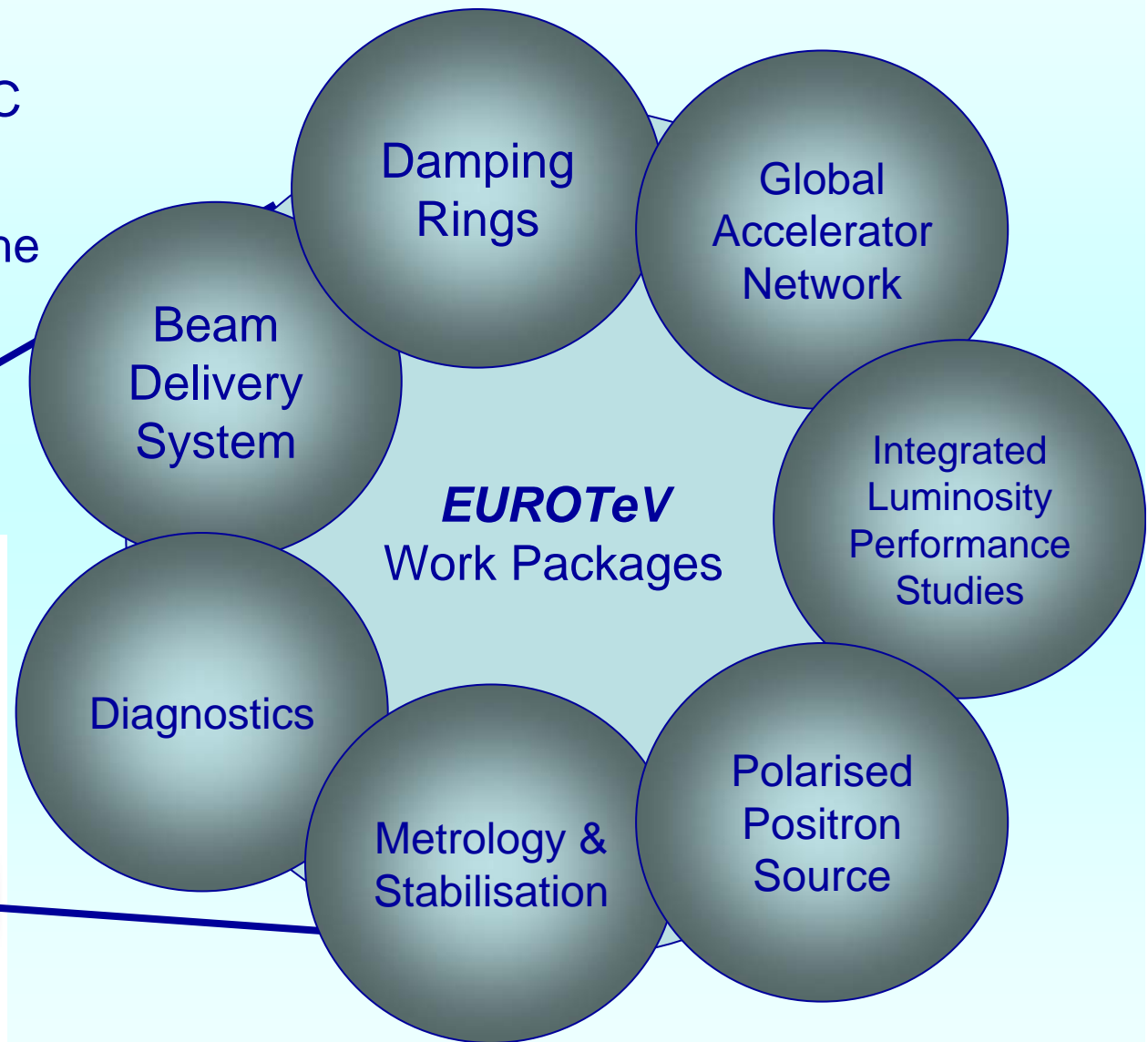
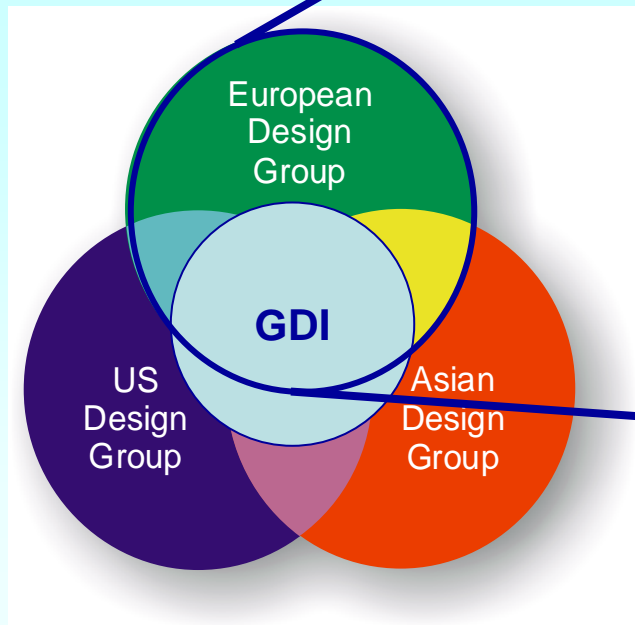
- EUROTeV is 18 months old (half-way)
- First-year ramp-up complete
- (Almost) all posts filled; now in “full production mode”
- ILC landscape has developed and is still rapidly evolving:
 - formal formation of International GDE (August 2005)
 - “Baseline Configuration” established (December 2005)
 - Reference Design Report (RDR) “matrix established to enable
 - detailed design
 - first-pass international cost estimate
 - ... by end of 2006
- *EUROTeV* has (and will) contribute to the RDR process

EUROTeV and the ILC Global Design Effort

Stated goal:

Integration into “Global ILC Design Effort”

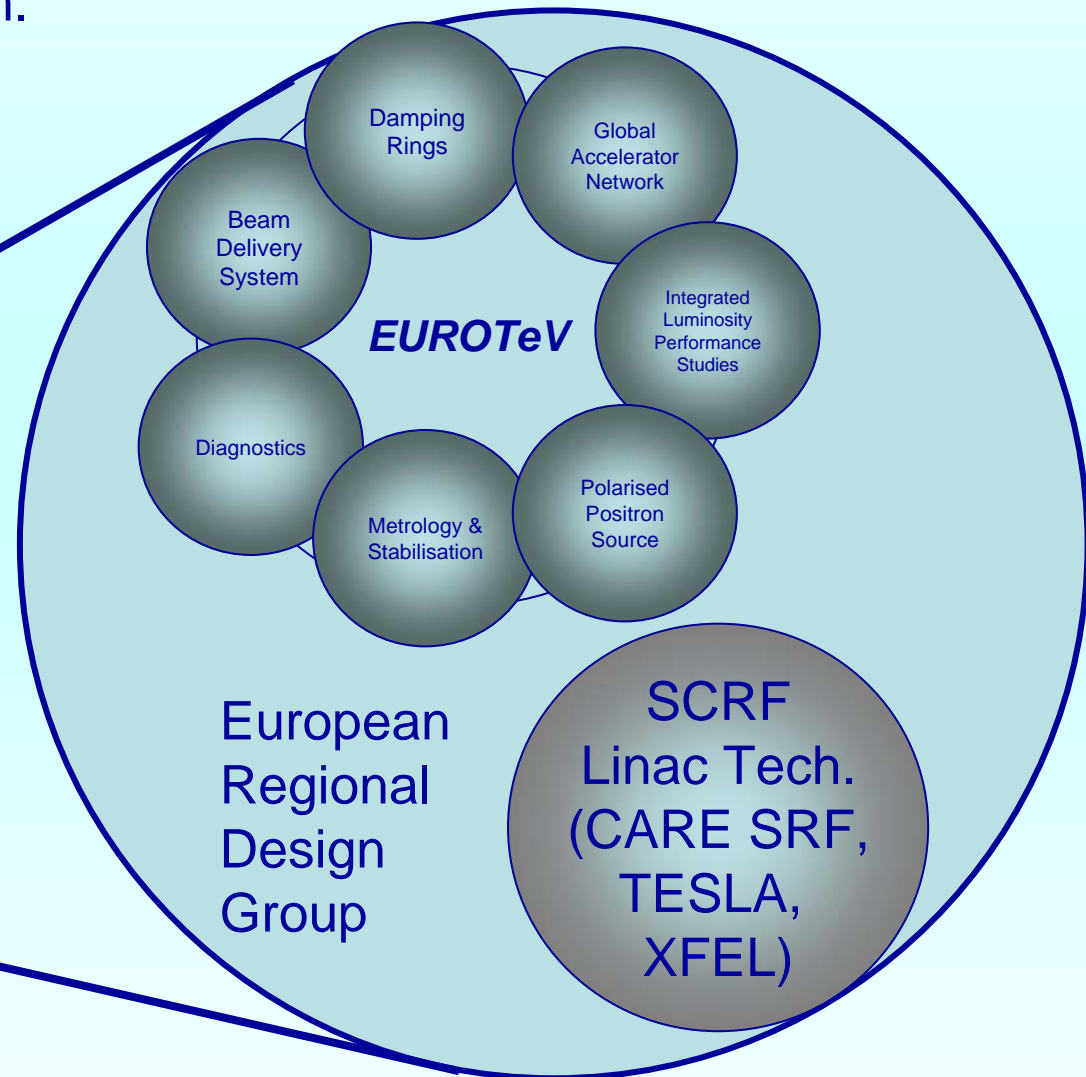
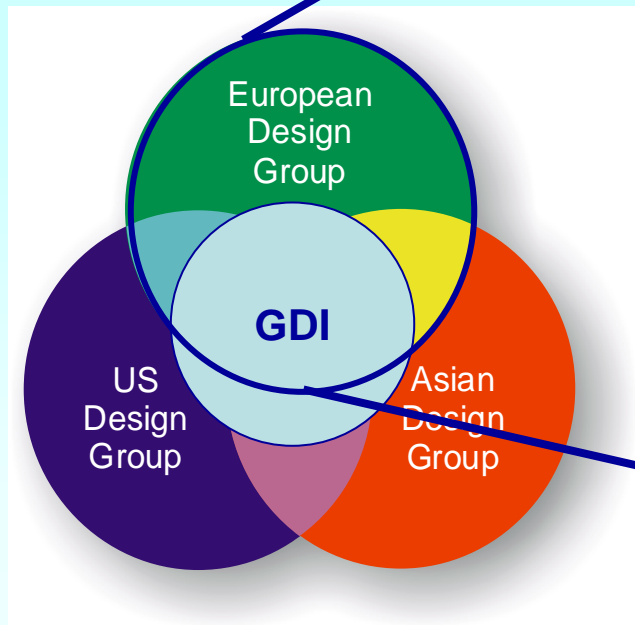
To form a central part of the European GDE



The ILC in Europe

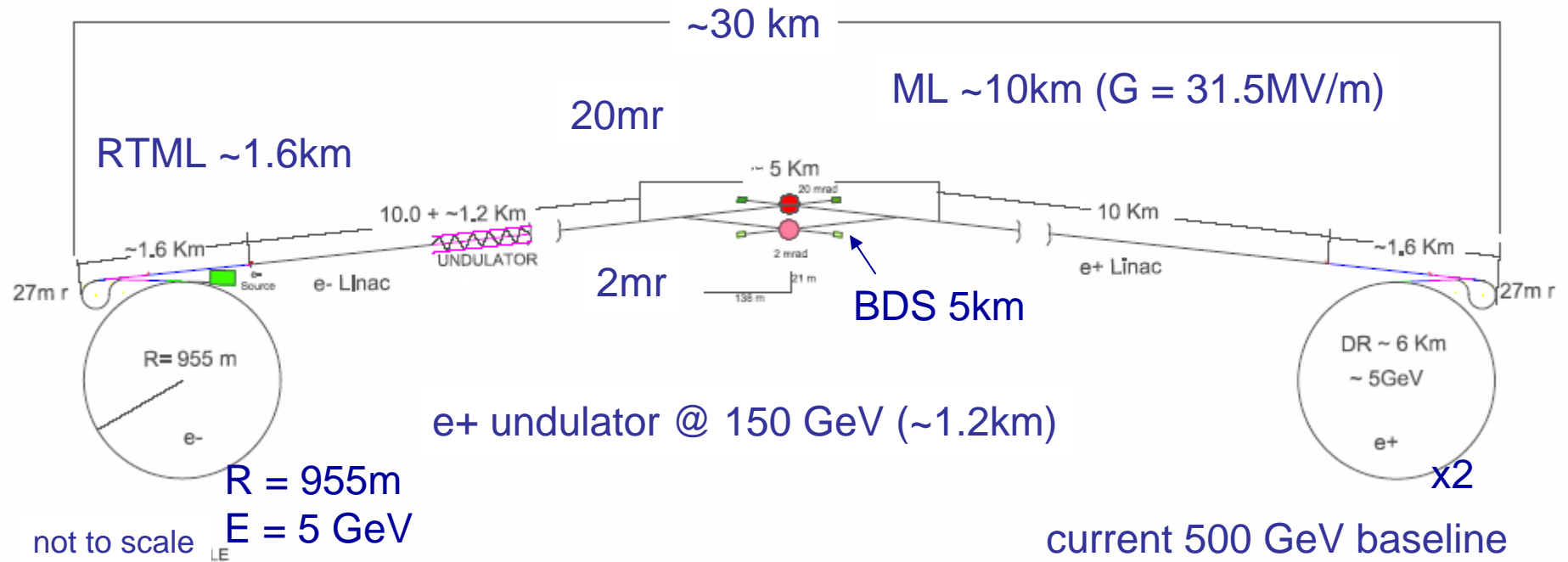
We know now that SCRF tech.
will be used for the ILC design.

SCRF must also be included



ILC Baseline Configuration

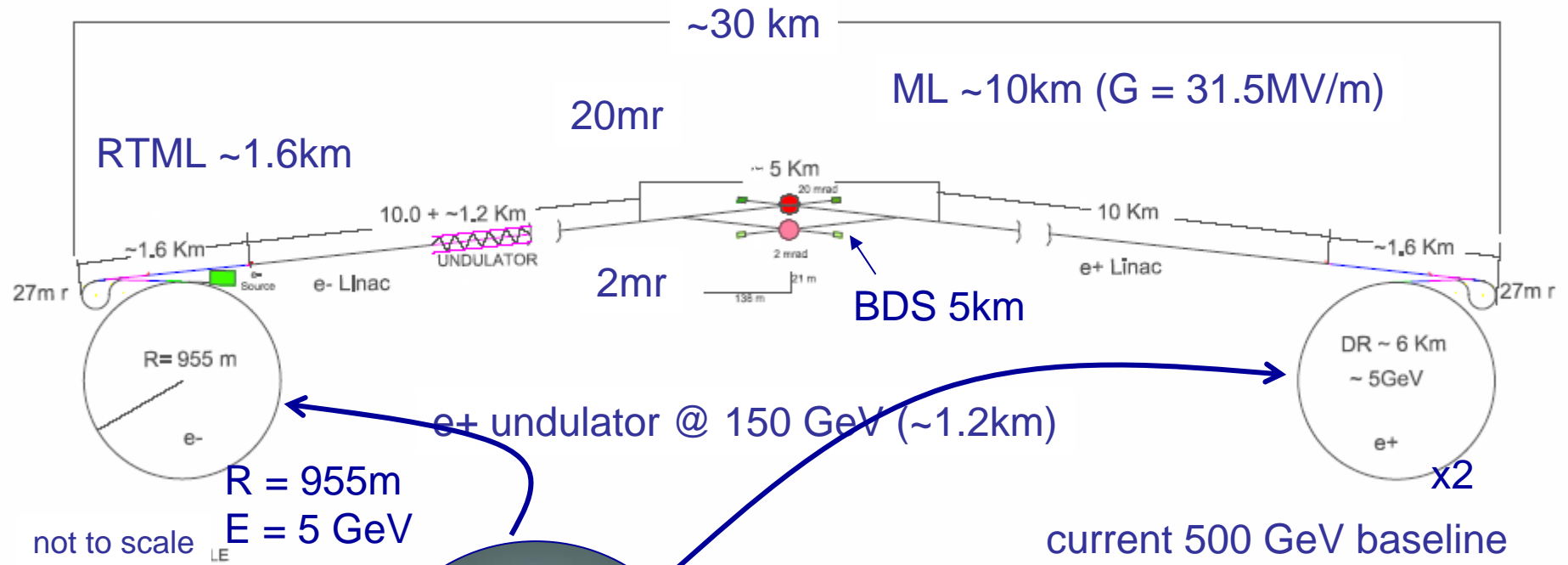
F. Asiri/SLAC 11-29-2005



- General layout above was formally accepted as baseline at the Frascati GDE meeting (December 2005)

ILC Baseline Configuration

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EUROTeV

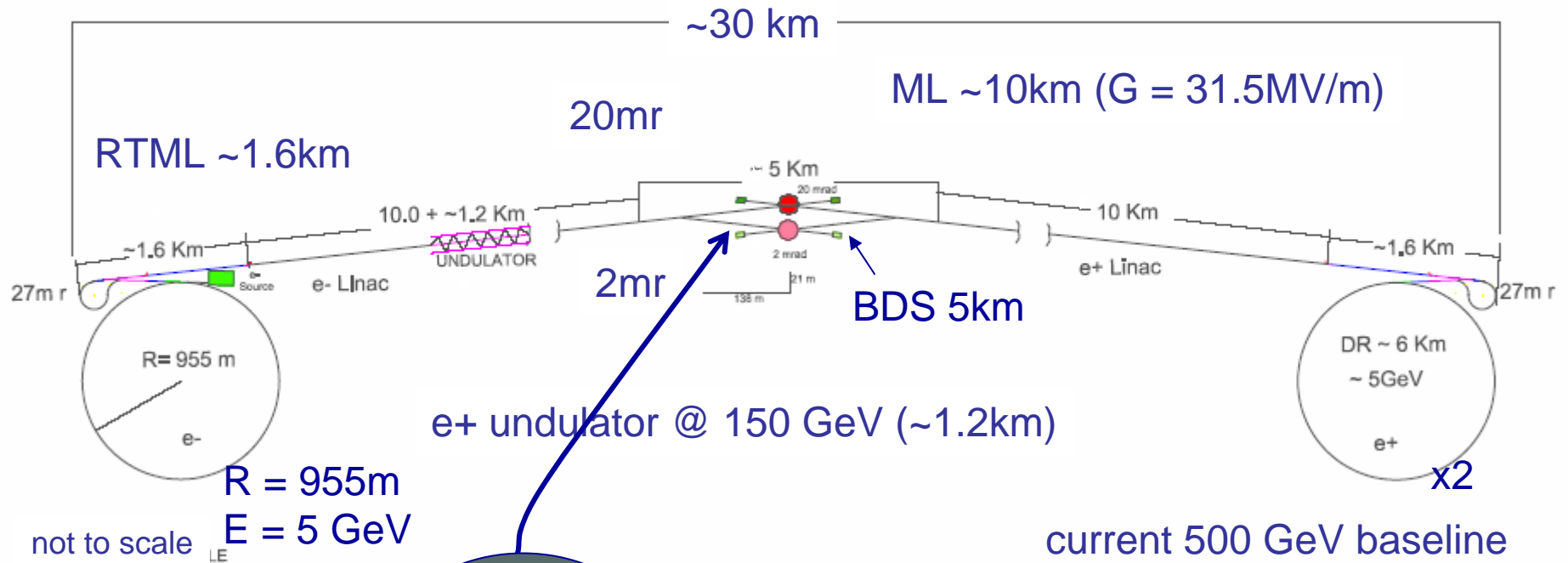
Damping Rings

Significant input to "baseline design decision"

S. Guiducci (DR System Area Lead)

ILC Baseline Configuration

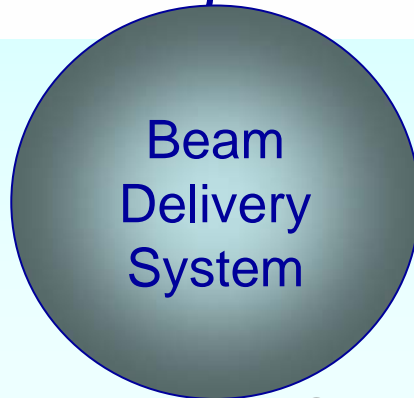
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not to scale
 $R = 955 \text{ m}$
 $E = 5 \text{ GeV}$

current 500 GeV baseline

EUROTeV

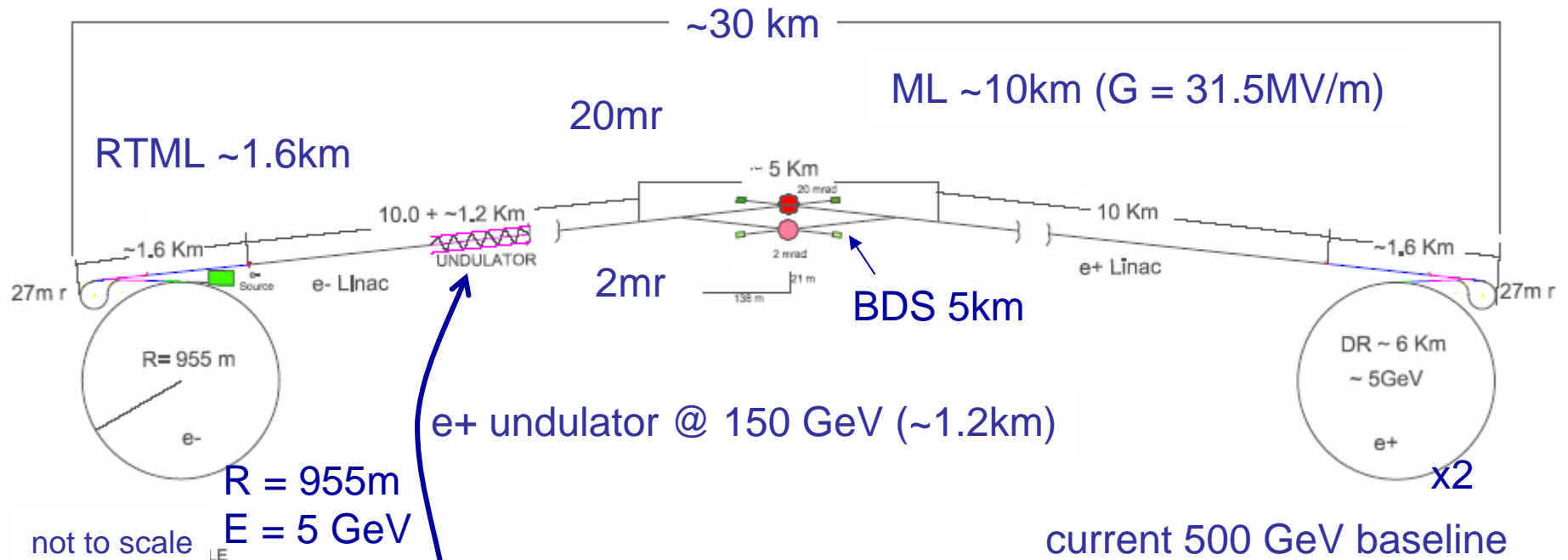


D. Angal-Kalinin
 (BDS System Area Lead)

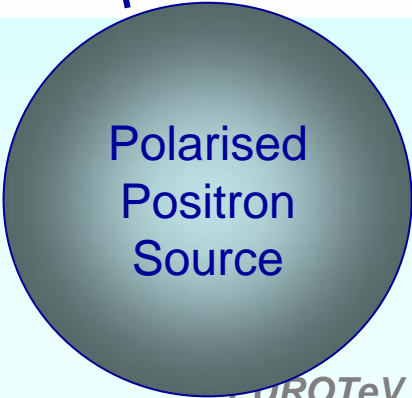
Major input into RDR activities

ILC Baseline Configuration

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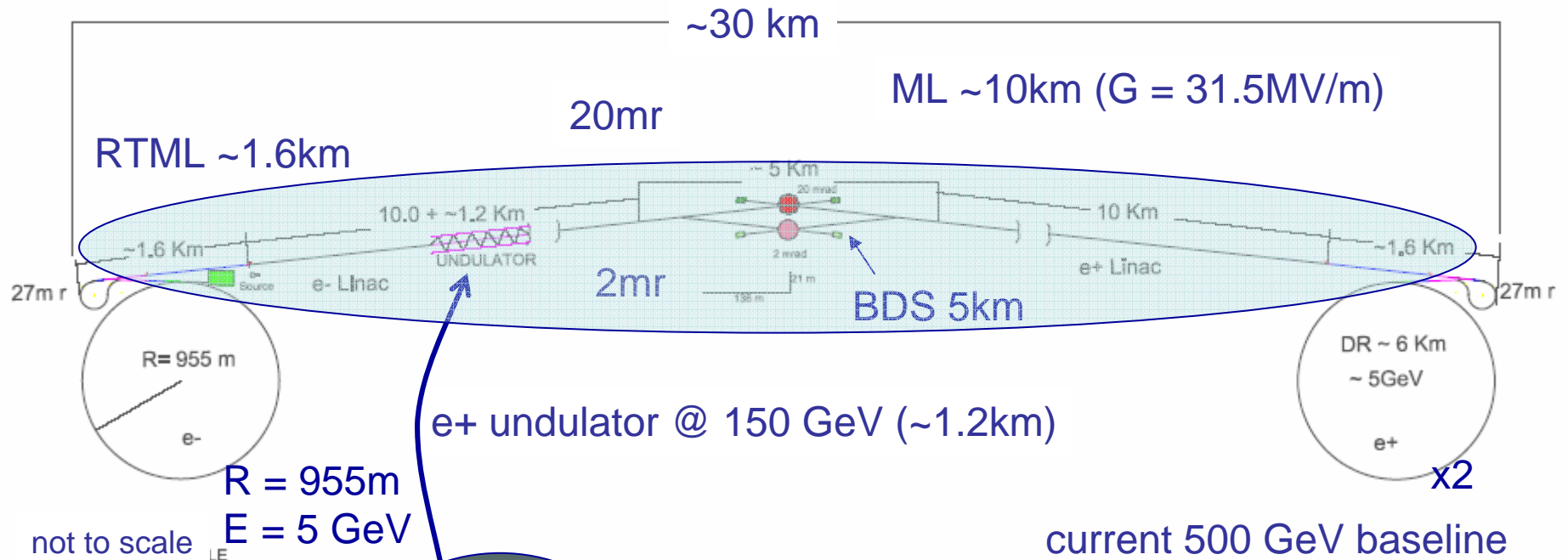
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- Undulator source R&D
- RDR Helical undulator design and cost estimate (J. Clarke CCLRC)

ILC Baseline Configuration

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EUROTeV

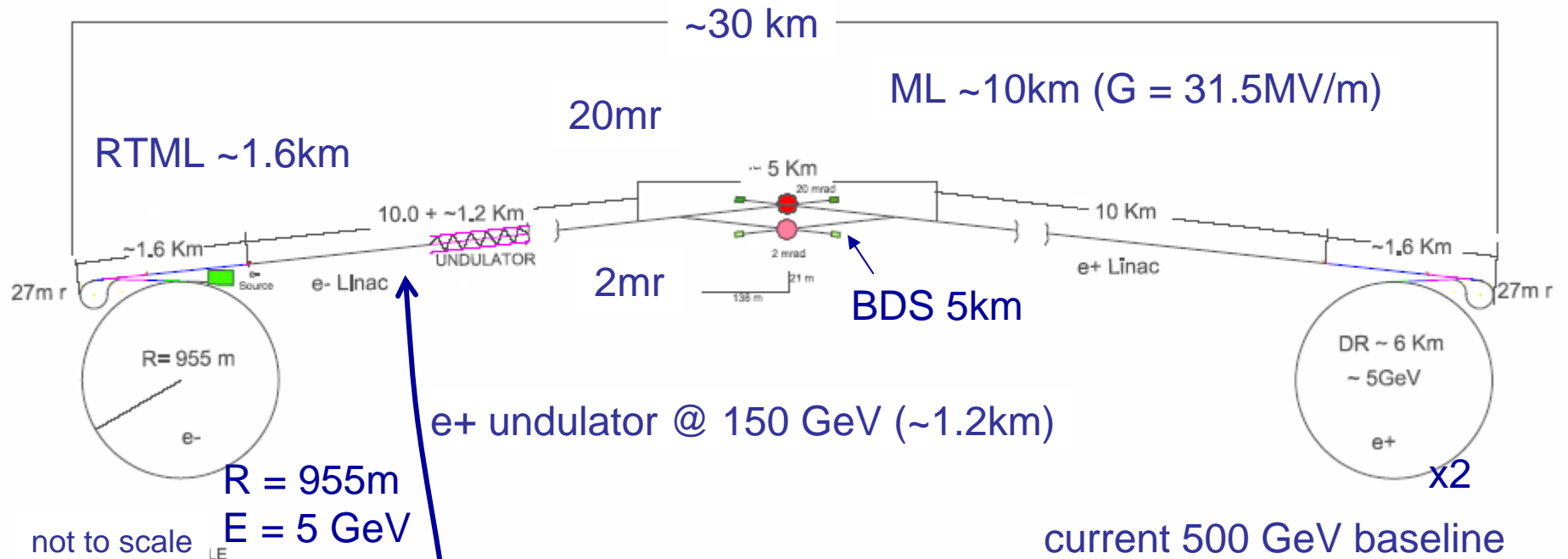
Integrated
Luminosity
Performance
Studies

RDR Acc. Phys. Lead: D. Schulte

EU playing a major (lead) role in simulations:
 - DFS studies; failure modes; feedback
 simulations; code development

ILC Baseline Configuration

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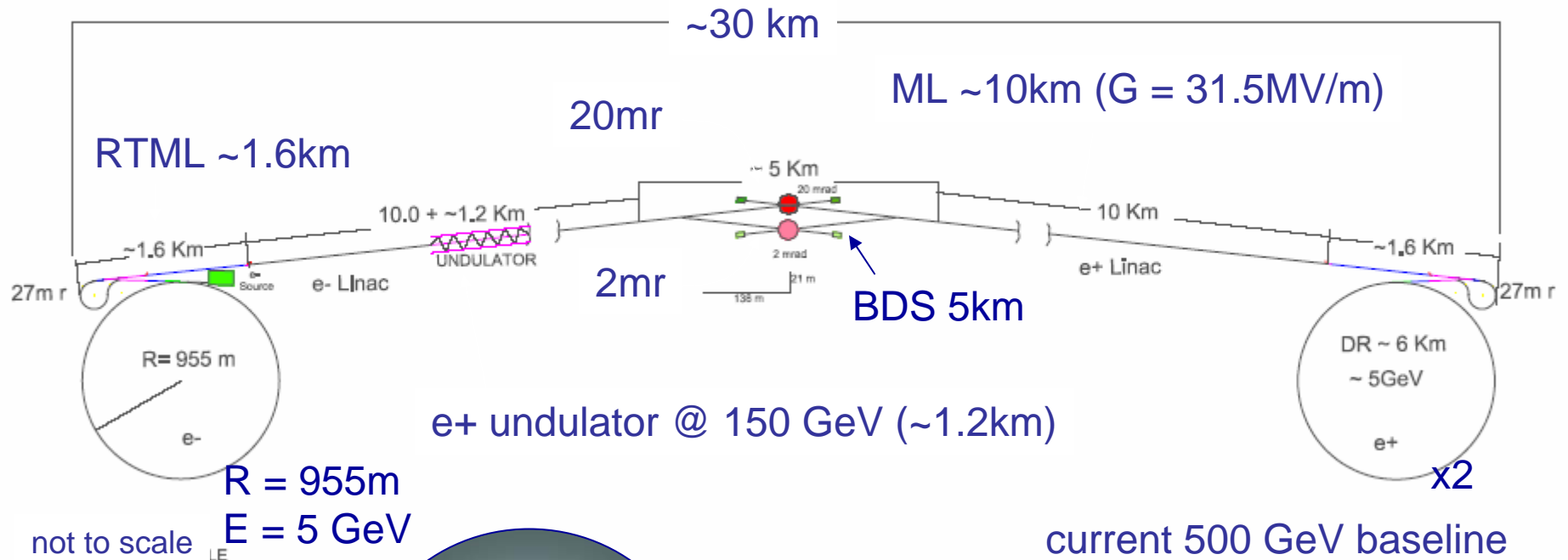
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Metrology & Stabilisation

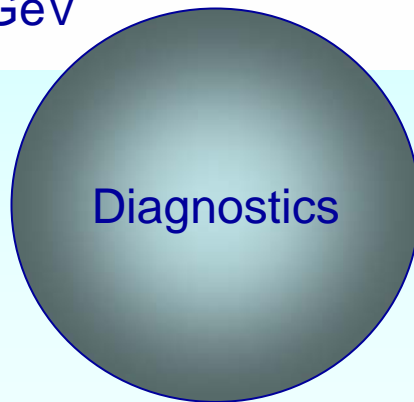
Important studies include "cold-mass" quad vibration studies for cryomodule
 nm-level studies for BDS magnets
 Rapid survey systems

ILC Baseline Configuration

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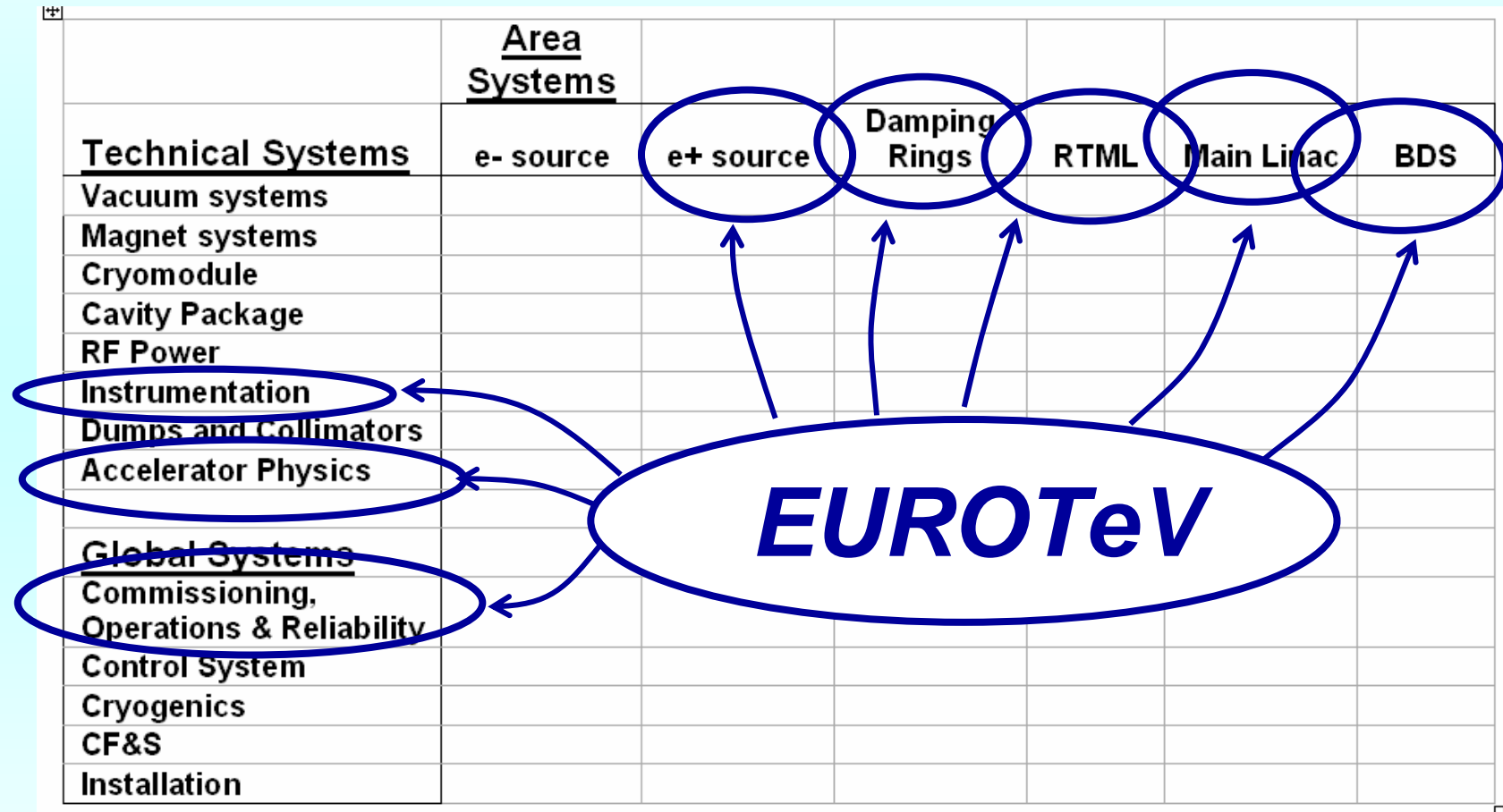
laser-wire (major ILC collaboration)
 BPM/Phase monitoring
 Spectrometry
 Polarimetry
 etc.

RDR Matrix

	<u>Area Systems</u>					
<u>Technical Systems</u>	e- source	e+ source	Damping Rings	RTML	Main Linac	BDS
Vacuum systems						
Magnet systems						
Cryomodule						
Cavity Package						
RF Power						
Instrumentation						
Dumps and Collimators						
Accelerator Physics						
<u>Global Systems</u>						
Commissioning, Operations & Reliability						
Control System						
Cryogenics						
CF&S						
Installation						

GDE Reference Design Report "Matrix"

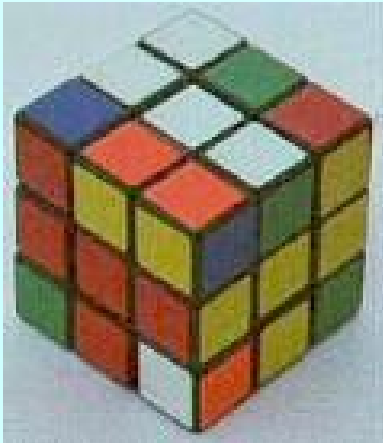
RDR Matrix



EUROTeV and the GDE

The major challenge for the GDE

From chaos...



GDE



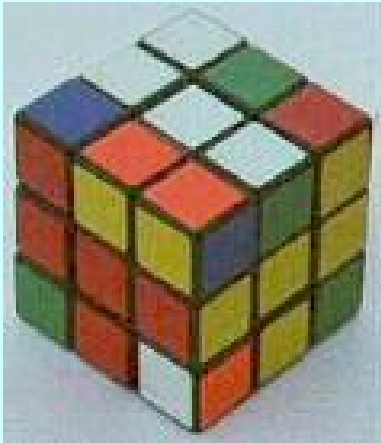
...comes order!



EUROTeV and the GDE

The major challenge for the GDE

From chaos...

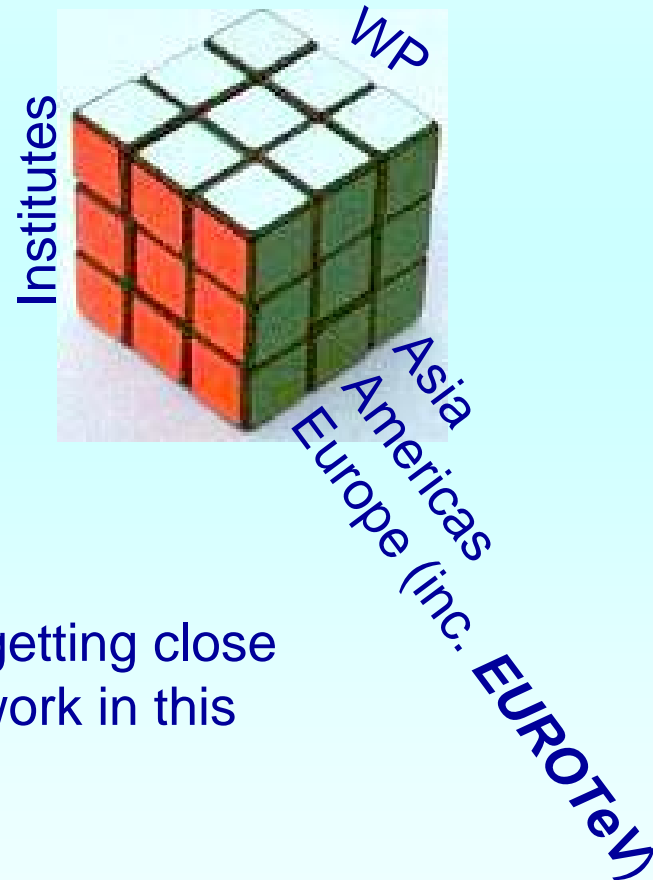


GDE



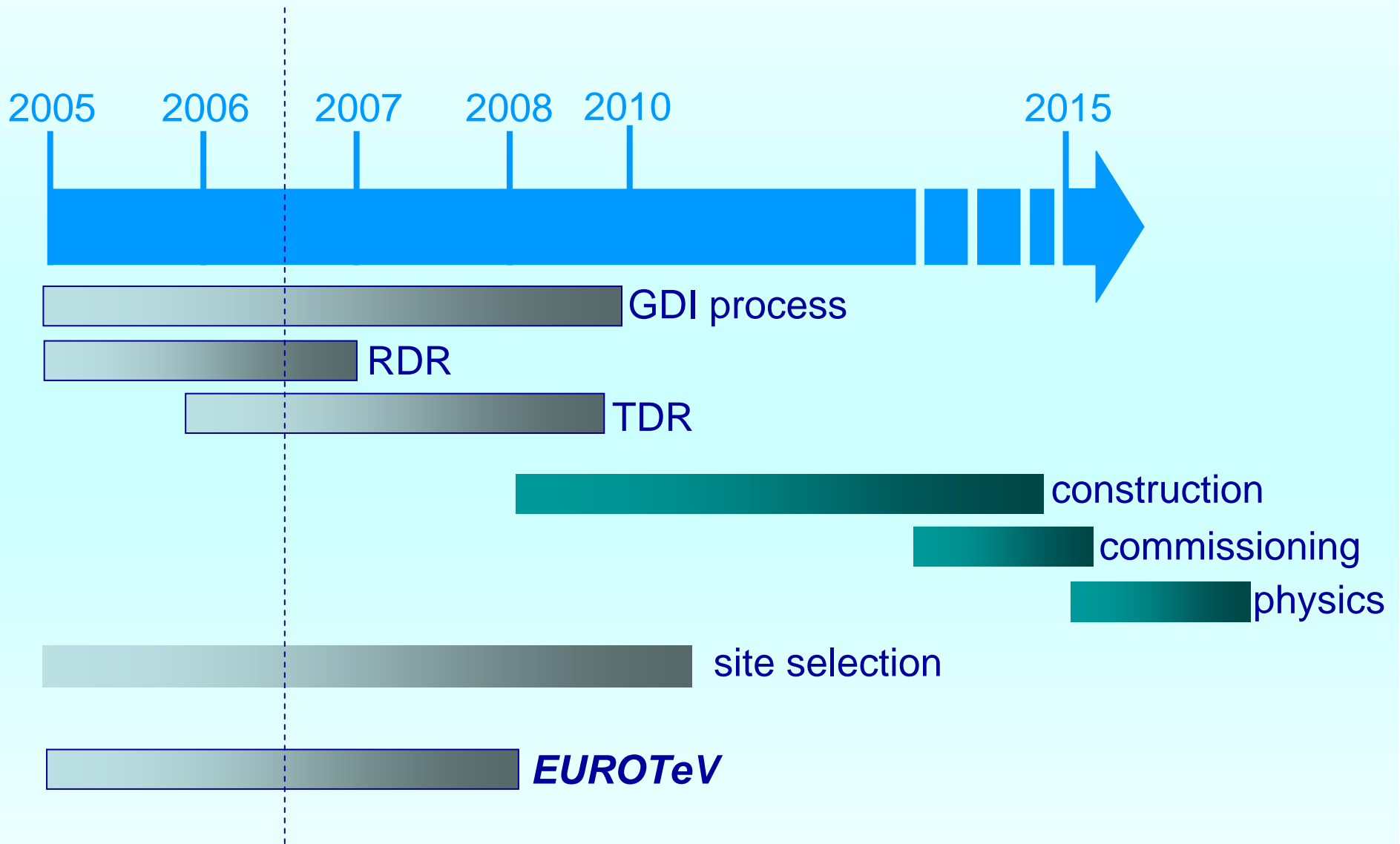
we
are
here

...comes order!



18 months down the (GDE) road and we are getting close
Europe (and EUROTeV) still have important work in this
integration effort

ILC Projected Time Line



EUROTeV and CLIC R&D

- Many synergies with ILC
- Emittance tuning simulations in the LET
- Design of bunch compression systems
- Studies of extraction line optics
- Diagnostics
- etc.

Outreach and Knowledge Dissemination

- www.eurotev.org
 - links to www.linearcollider.org
- >50 EUROTeV reports currently on website
 - ~20 in pipeline for EPAC 2006
- All EUROTeV reports to be back-numbered as ILC notes