

The Evolution of PISA from Perspective of Participating Countries

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Overview

PISA in Canada

PISA for Development

PISA in Ukraine

PISA in the Future

Large Scale Assessment in Canada, 1999

Assessments

- Provincial Examinations – in some provinces
- Third International Mathematics and Science Study – Repeat (TIMSS-R)
- National Longitudinal Survey of Children and Youth (NLSCY)
- School Achievement Indicators Program (SAIP)

Uses

- Individual high-stakes decisions
- Limited Academic research
- Limited Policy Research
- Public reporting focused on comparisons of mean scores

Large Scale Assessment Research, 1999-2001



New sampling and psychometric paradigms

Matrix sampling
School-level imputation
Plausible values



New research paradigms

Ecological effects
Random effects
Data visualization



New PC Computing Capacity

Windows 2000 (4Gb RAM!!!!)
Intel Pentium (>1GHz!!!!)



New analysis software

Multilevel modeling
Structural Equation modeling
Matrix algebra with graphics

TIMSS-R (1999) Report

Chapter 1	International Student Achievement in Mathematics
Chapter 2	Performance at International Benchmarks
Chapter 3	Average Achievement in the Mathematics Content Areas
Chapter 4	Students' Backgrounds and Attitudes Towards Mathematics
Chapter 5	The Mathematics Curriculum
Chapter 6	Teachers and Instruction
Chapter 7	School Contexts for Learning and Instruction

Implementation of PISA 2000



Scope

All OECD countries

Multiple content domains

Innovative content domain definitions



Stakeholder Engagement

Board of Participating Countries

Technical Advisory Group



Statistical and Psychometric Methods

NPM workshops

Invited researchers within Canada



Reporting

Data Visualization

Comparison of outcomes and relative effect sizes across regions

Canada PISA 2000 Public Report

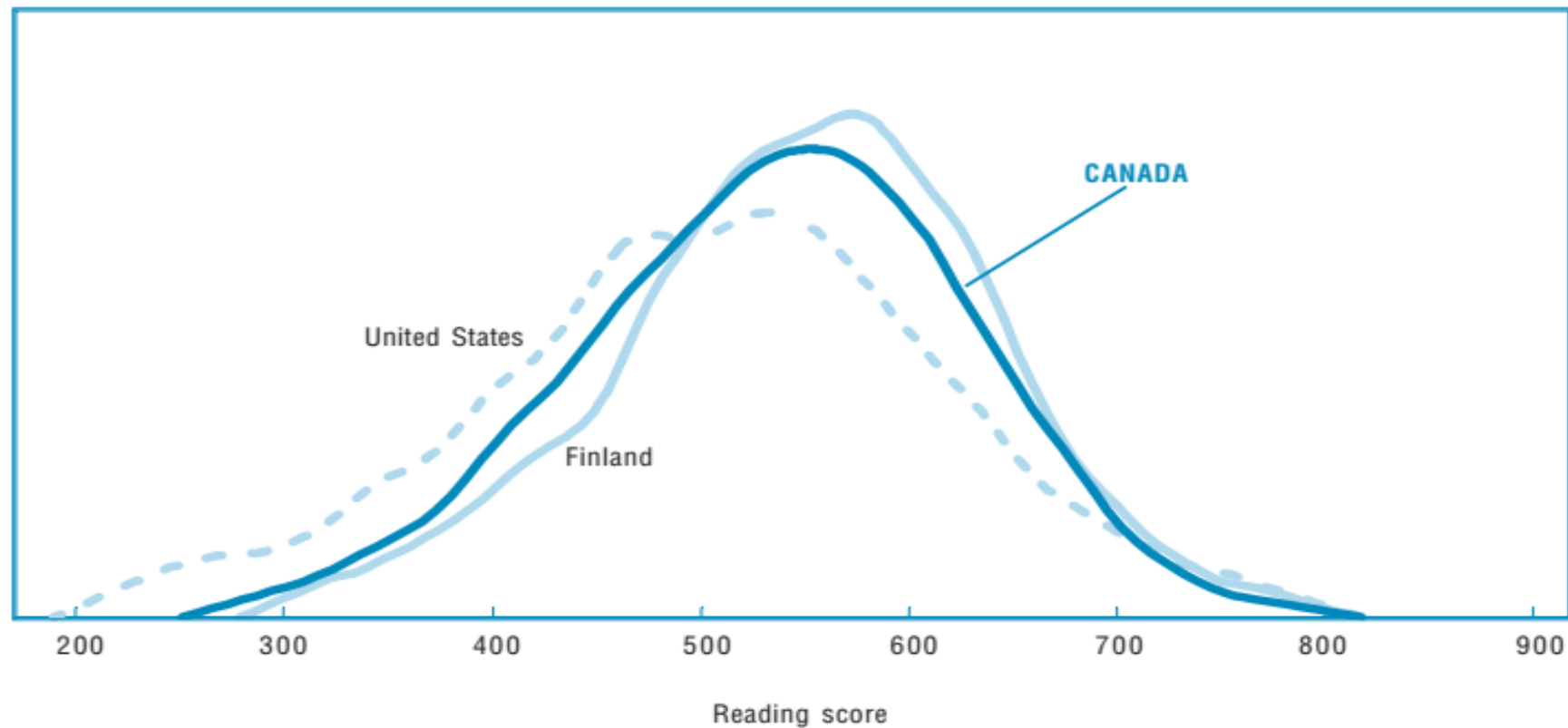
- ◇ Canada performs well internationally
- ◇ Girls outperformed Boys in reading
- ◇ Socio-economic status has a weaker relationship to performance in Canada than in most other countries
- ◇ Student, family and school characteristics have independent effects on performance
- ◇ Rural student perform poorly compared to urban students*
- ◇ Minority language students performed less well*



Distributions vs Means

FIGURE 1.7

The Distribution of Reading Scores in Canada, Finland and the United States



Source: Bussière, P., F. Cartwright, R. Crocker, M. Xin, J. Oderkirk and Y. Zhang (2001), Measuring up: The performance of Canada's youth in reading, mathematics and science, Ottawa: Statistics Canada.

Canada PISA 2000 Issues and Strategies



Setting Research Agenda



Training researchers in appropriate methods



Encouraging independent research



Encouraging use of results for decision making

Unexpected consequences of PISA

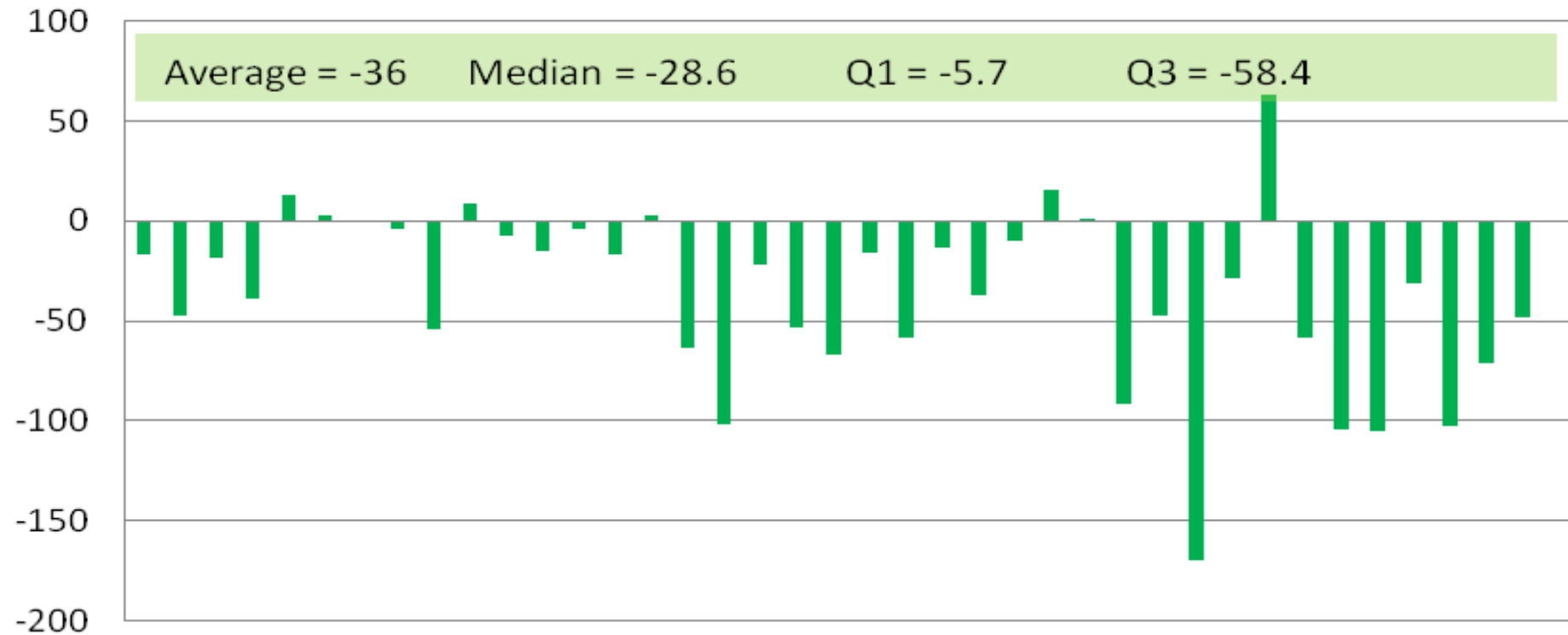
- ◊ Provinces drop out of TIMSS
- ◊ Changes to curricula
- ◊ Provincial assessments emulate PISA
- ◊ National assessment coordinates with PISA

Emergent Issues: PISA 2000-2006

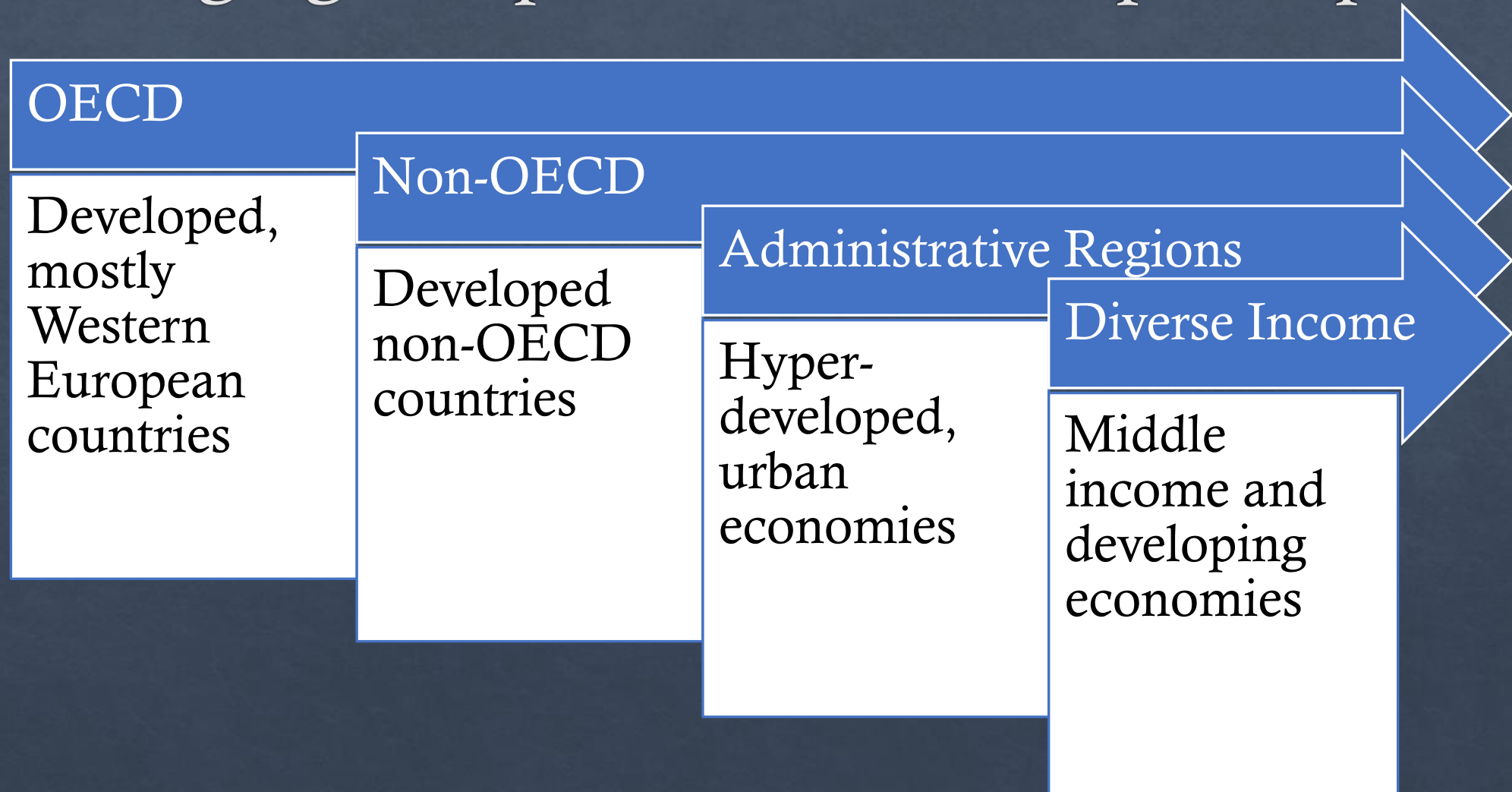
- ◆ Ambiguity about results from minor domains
- ◆ Ambiguous trend data
- ◆ Complacency
- ◆ Importance of sustained engagement
- ◆ Importance of purpose

Example, Ireland PISA 2009

Figure 4.1: Difference in reading score between 2000 and 2009 for the 39 schools who participated in both PISA cycles



Changing composition of PISA participants



PISA for Development

Development of Needs Assessment Framework

- PISA documents
- SABER-SA ILSA
- Lessons learned from other large-scale assessments

Piloting PISA-D tools

- Zambia
- Senegal
- Cambodia

Capacity Building Planning



Capacity Building Element A

Capacity Building Element B

Capacity Building Element C

Monitoring and Evaluation



Capacity Building Planning Complicating factors



Multiple
agents



Multiple
interests

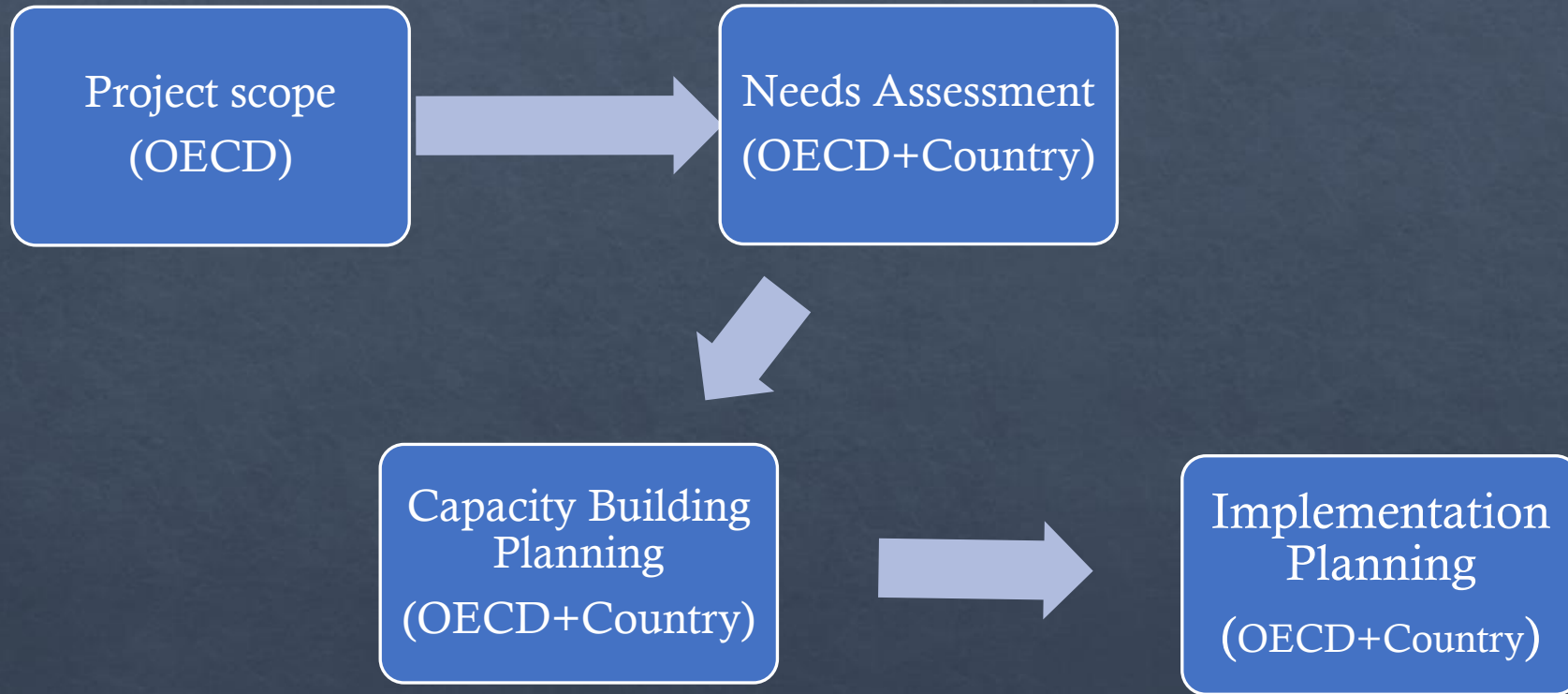


Variable
scope

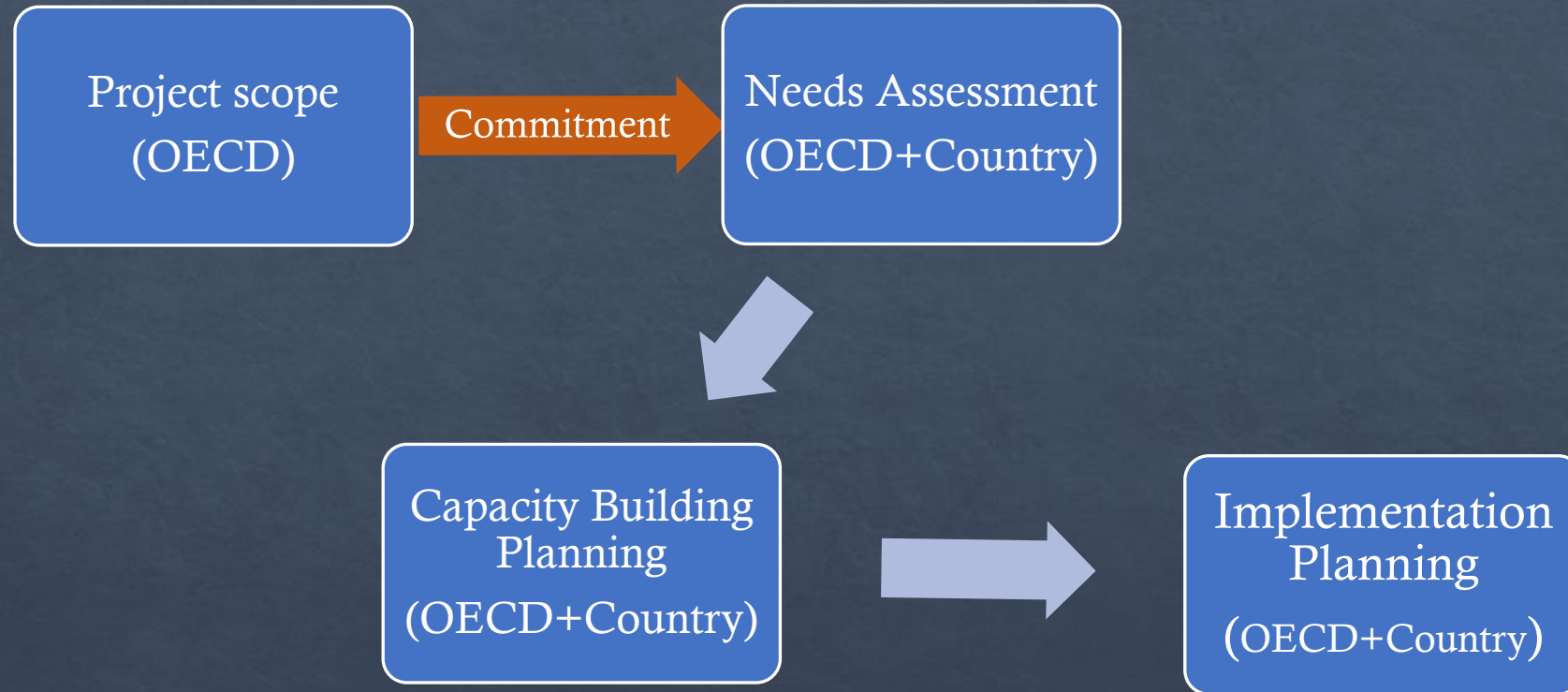


Varying
timelines

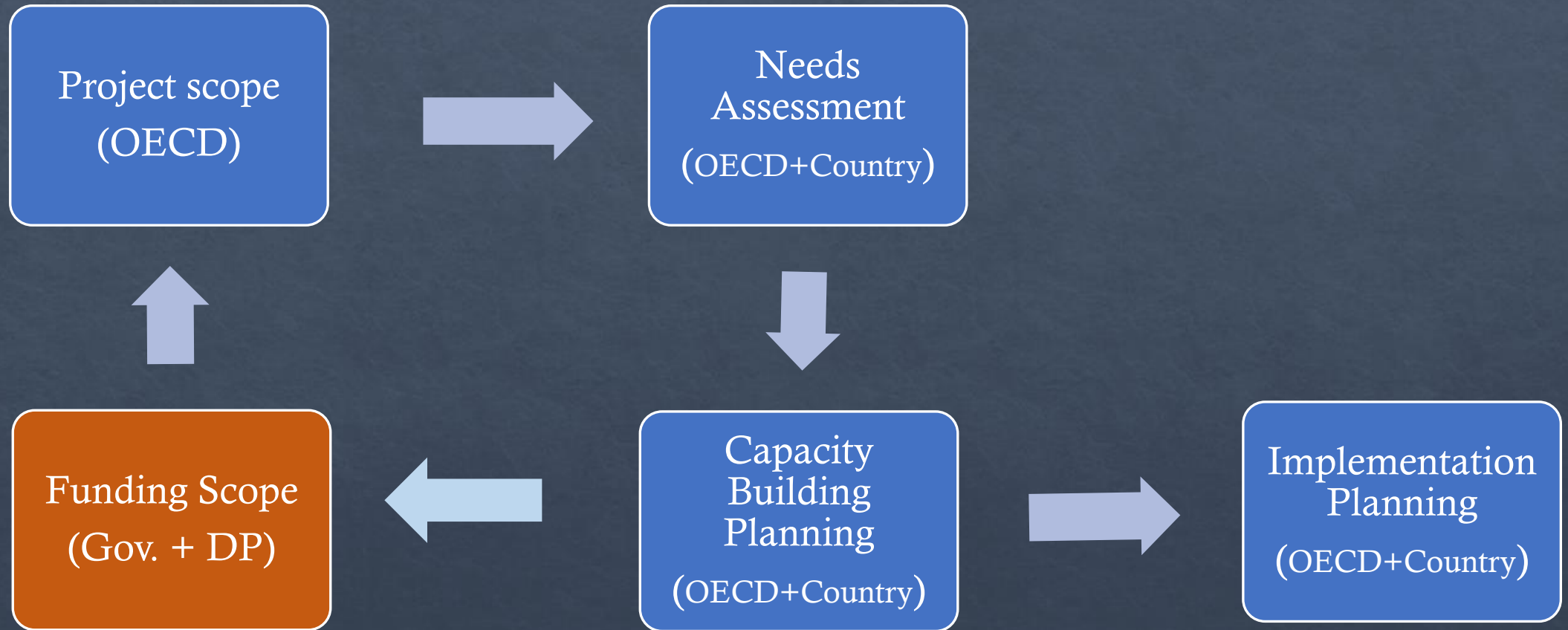
Ideal Model



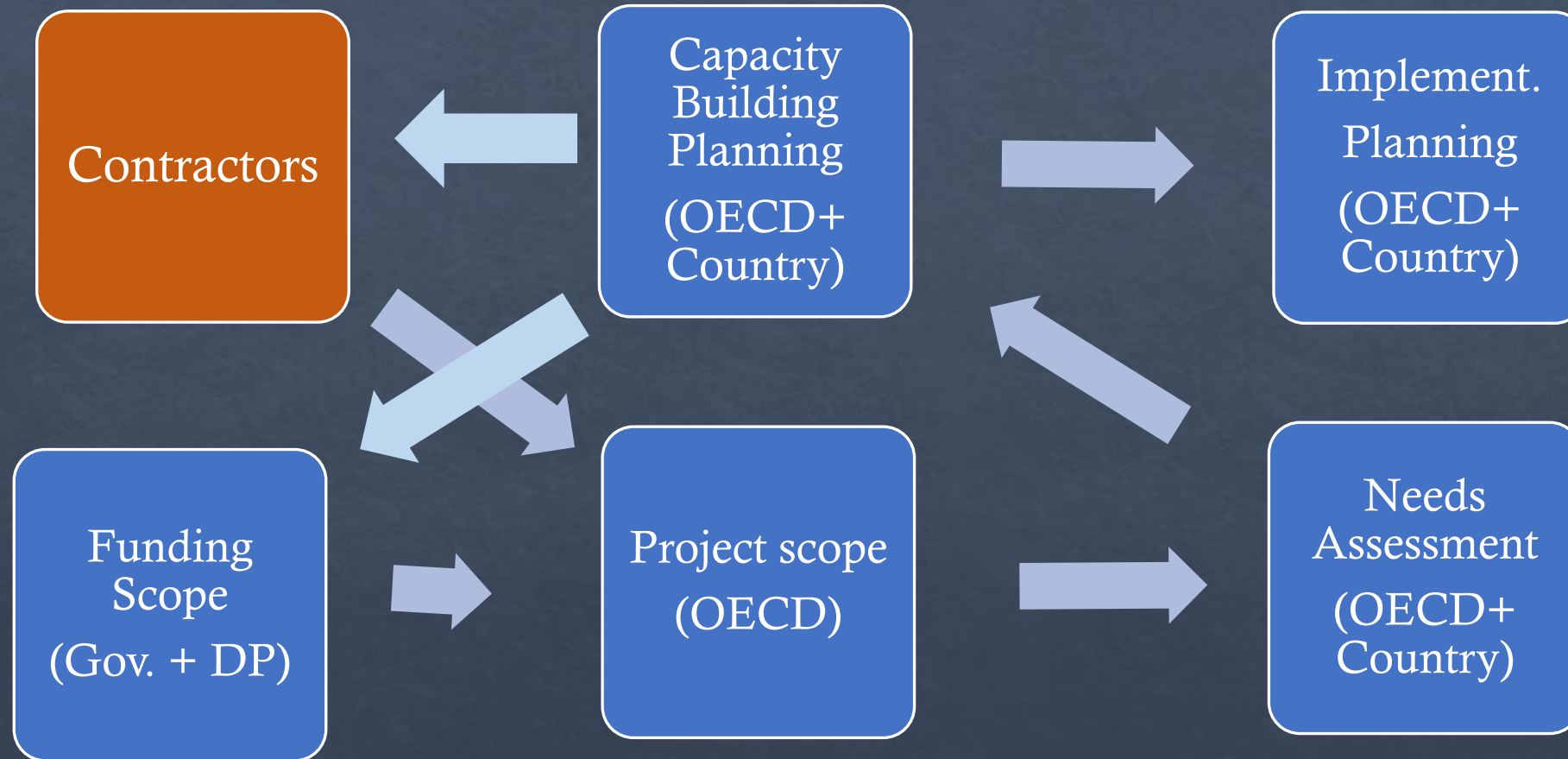
Interests vs Commitment



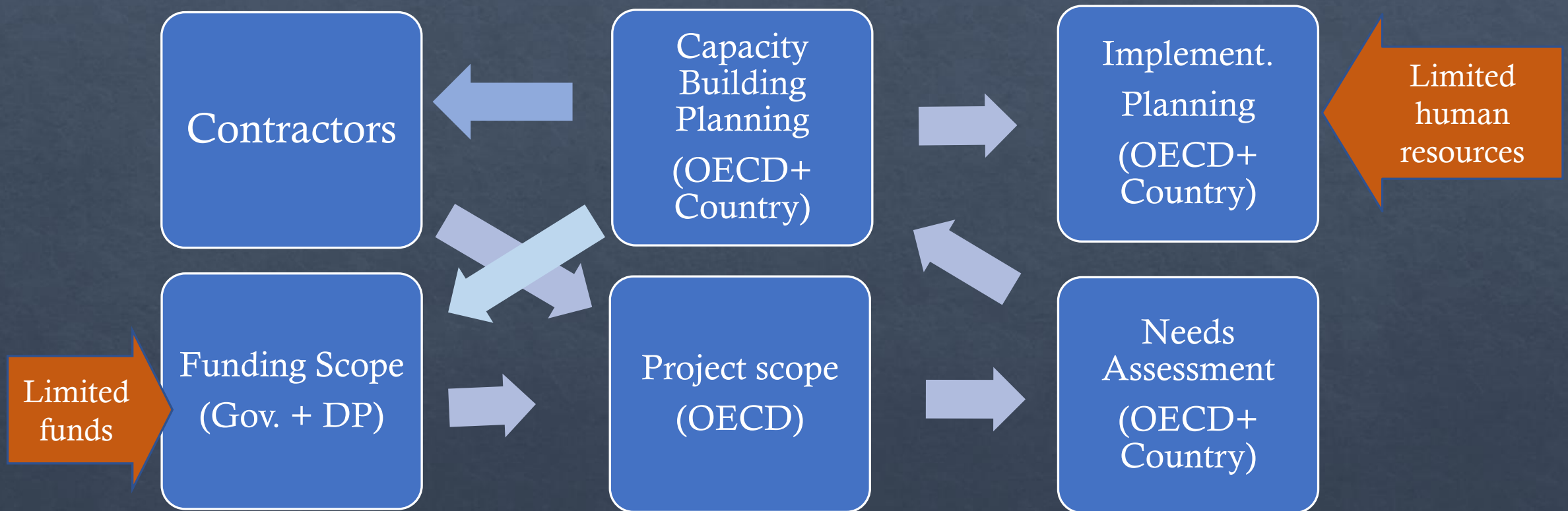
Funding Arrangements and Development Goals



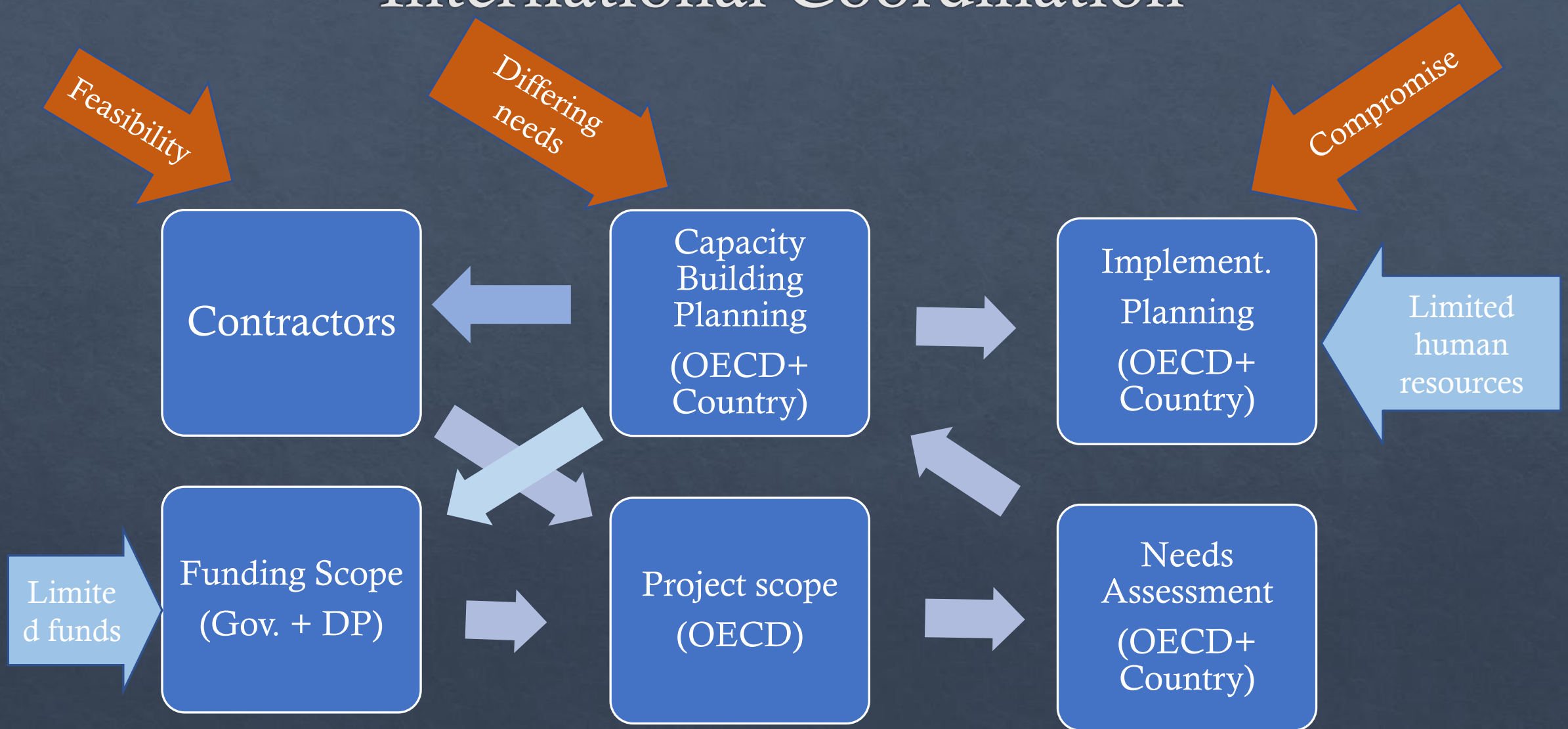
PISA Contractors



Competing same-sector projects



International Coordination



Lessons Learned for Ukraine



Capacity building on an international timeline is hard!



Clarify stakeholder interests and constraints



Share the Big Picture early and often



Plan for an iterative process



Collaborate continuously with stakeholders



Insist on commitments to capacity building within the project scope

Needs Assessment Rating #7. Effect of political climate on implementation

Programme output	Country capacity in assessment, analysis and use of results for monitoring and improvement
Current status	(Established) Political climate does not adversely affect the project
Target status	(Advanced) All relevant political bodies (government and opposition) actively support the project

Justification: Many key stakeholder groups are aware of PISA and perceive it to be useful in terms of increasing international co-operation and providing a more competency-based review of the quality of learning in Ukraine. However, the dynamic nature of politics and economics in Ukraine tend to focus attention on more immediate issues and implementing existing political agendas. Most stakeholders have not incorporated PISA implementation, data or analysis results into their existing agendas. As a result, the existing support does not manifest into advocacy for the project.

Needs Assessment Rating #17. Perceptions of external survey-based large-scale assessment (LSA) of lower-level stakeholders

Programme output	Country capacity in assessment, analysis and use of results for monitoring and improvement
Current status	(Latent) No knowledge of external LSA or assume that LSA is used to evaluate specific student or school performance
Target status	(Established) Recognise a clear washback effect from the results of LSA and the policies and practices affecting learning

Justification: School teachers, principals, students and parents are not aware of LSA beyond the ZNO, which is used to evaluate individuals and, to a lesser extent, facilitate comparisons between schools. Historically high levels of corruption in secondary level assessment are associated with the use of results at individual levels. To prevent these factors from influence data from both the cognitive and contextual instruments, the NC will need to communicate the purpose of sample-based LSA and how the results will be used.

	Capacity Building Elements
1	Project management
2	External data access and independent inquiry
3	Competency-based education and assessment
4	Coordination of PISA implementation partners
5	Psychometric capacity
6	Data utilization and evidence-based decision making
7	Development of data infrastructure to support analysis
8	Analysis Capacity
9	Coordination of stakeholders
10	Item and question banking

Next Steps

Evaluate capacity development



Adjust capacity targets



Incorporate lessons learned



Modify plan



Implement revised plan

Potential Future Improvements



Use of technology for better dialogue between participating countries, implementation partners, and OECD



Policy-relevant sampling



Country-specific content

- Nuanced assessments
- Policy-relevant questionnaire content