

CDIO 2016, Turku, Finland



Philanthropy and Engineering Education –

The Experience of Temasek Foundation of Singapore

Scope



Temasek Foundation of Singapore
– Mandate and Outreach

Temasek Foundation’s “Theory
of Change” & Core Programmes
with a focus on CDIO

Learning Points from
Temasek Foundation’s work

Temasek Foundation

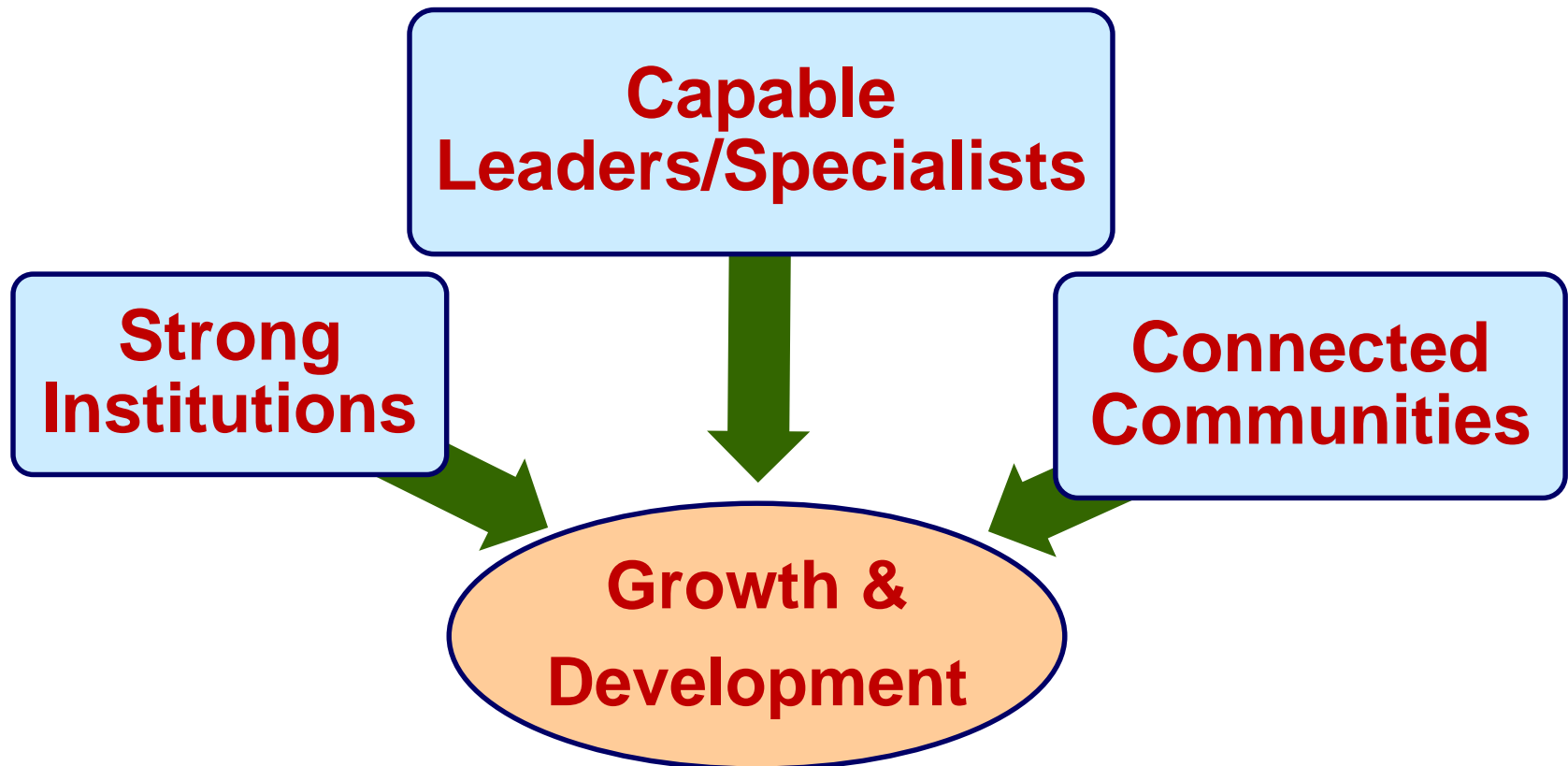
Mandate

- Set up in 2007 by Temasek which is an investment company based in Singapore to contribute to development in Asia through:
 - Building Capacity, Strengthening Institutions and Fostering Learning Exchange

Outreach: Total for Nine Years

- US\$118 million grants; 302 programmes;
- $\geq 35,000$ participants; from 20 Asian countries

Foundation's Theory of Change



Foundation's Programme Strategy

Multiplier Effect

Train leaders, specialists, trainers, master teachers, etc

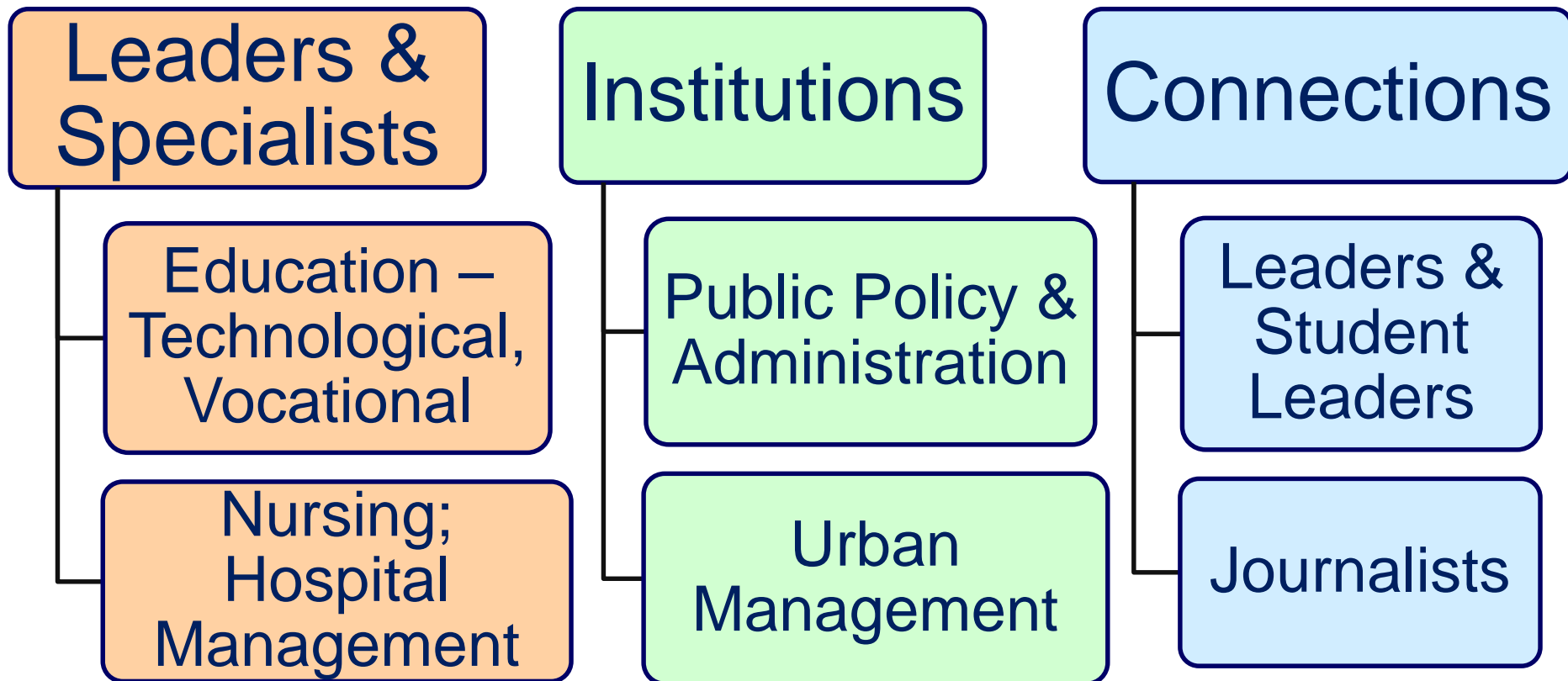
Institutional Improvement

Renew policies, laws, systems, standards, pedagogy, curriculum, etc

Sustained Impact

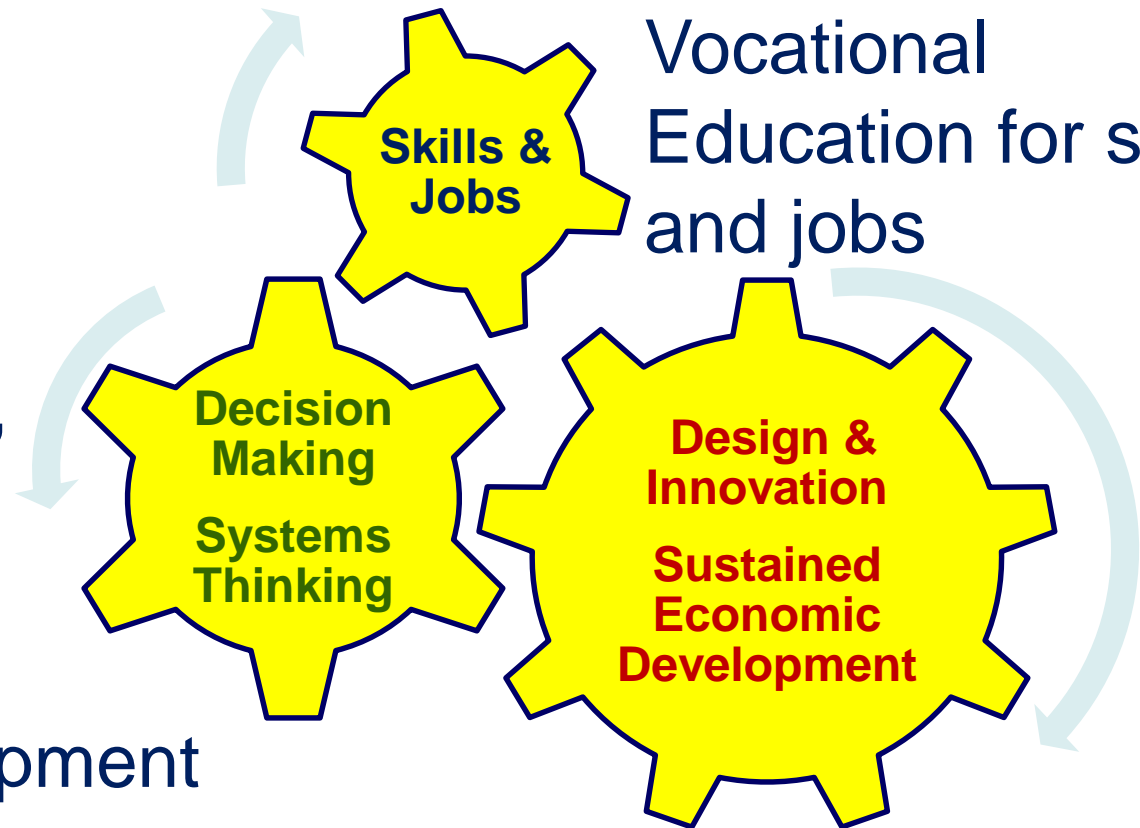
Owned and led by Host Community

Foundation's Core Programmes



Supporting Technological & Vocational Education

Technological Education (focus on S.T.E.M.) for decision making, systems thinking, design and innovation, and sustained economic development



Vocational Education for skills and jobs

Supporting Technological Education (focus on S.T.E.M.)

P
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Curriculum/
Pedagogy

Standards/
Assessments/
Institution Mgt

Education
Policy &
Regulations

Leaders/
Specialists

Leaders/
Managers/
Assessors

Leaders/
Legislators/
Officials

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Supporting S.T.E.M. Education through CDIO Initiative

**(1) CDIO innovative,
adaptable & can be
applied to many fields**

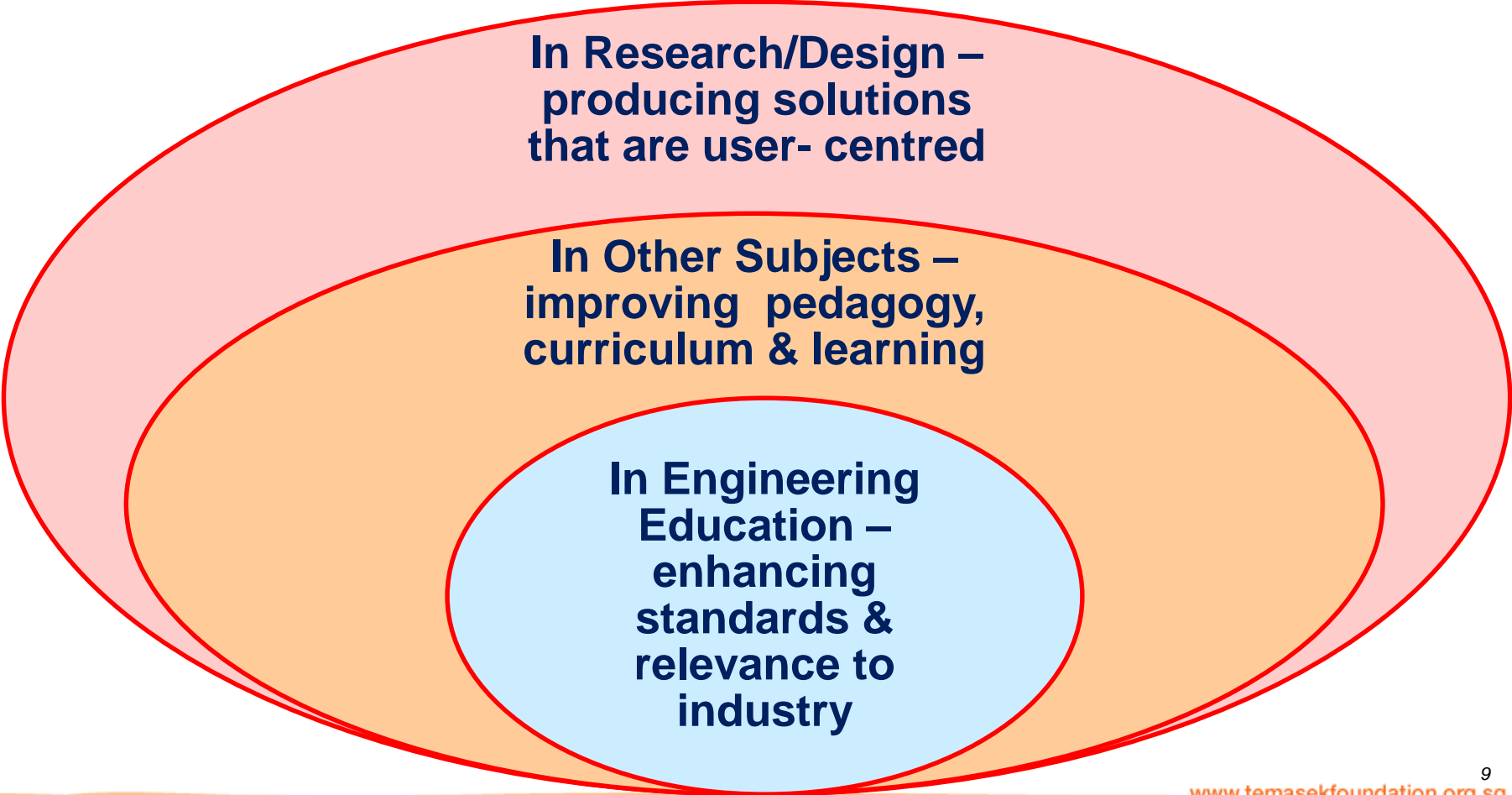
**(2) Singapore
Polytechnic as leader
– capability since 2004**

CDIO

**(4) CDIO aligned with
Temasek Foundation's
capacity-building**

**(3) Asian institutions
embracing CDIO and
learning together**

CDIO in Singapore Polytechnic



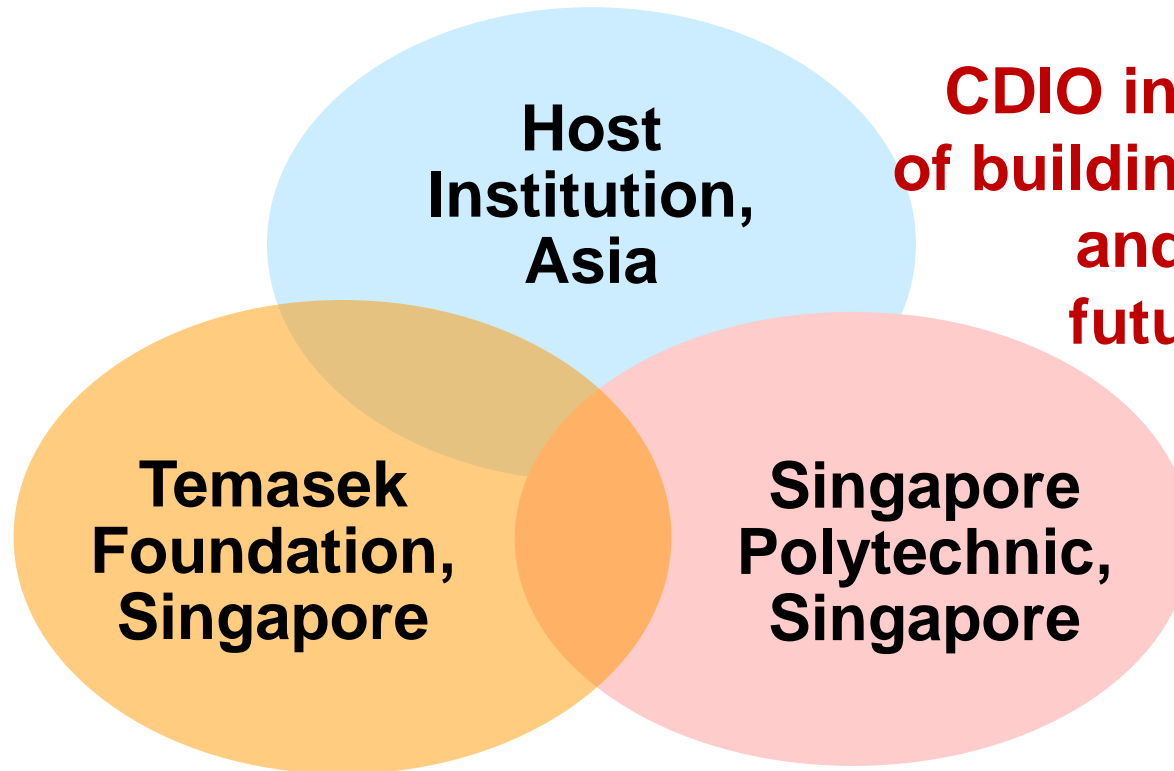
**In Research/Design –
producing solutions
that are user- centred**

**In Other Subjects –
improving pedagogy,
curriculum & learning**

**In Engineering
Education –
enhancing
standards &
relevance to
industry**

Temasek Foundation supporting the CDIO Initiative

Temasek Foundation pleased to partner Singapore Polytechnic and Host Institutions from Asia



CDIO integral part of building capacity and nurturing future leaders

Some Learning Points

1. Working with Governments

- Government budgets normally fund education but philanthropy may boost efforts, introduce new models and provide access to content
- Government agencies are better able to multiply programme learning for systemic, institutional, community-wide improvements

Some Learning Points

2. Working across Cultures

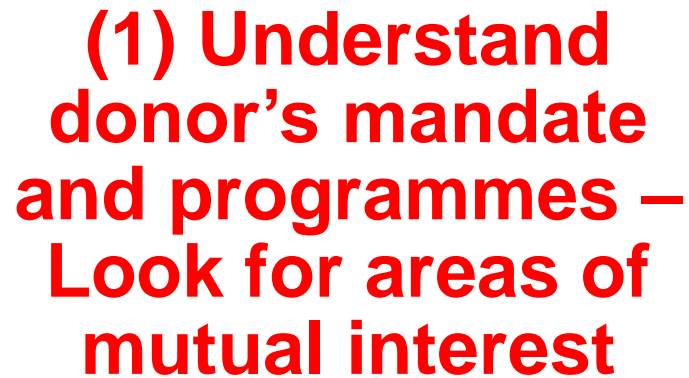
- Philanthropic organisations must not prescribe solutions, and must factor in culture and context in programmes
- Host Communities own and lead in design, development and implementation of programme; co-funding where they can

Some Learning Points

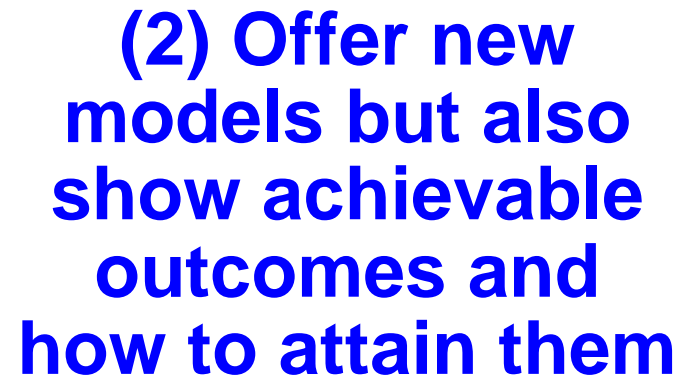
3. Working for Outcomes and Impact

- Programmes are calibrated based on needs and readiness to progress, with follow-up programmes for sustained outcomes/impact
- Programmes that cover training, scholarships, policies & systems, equipment, infrastructure, etc, are useful – help to sustain improvements

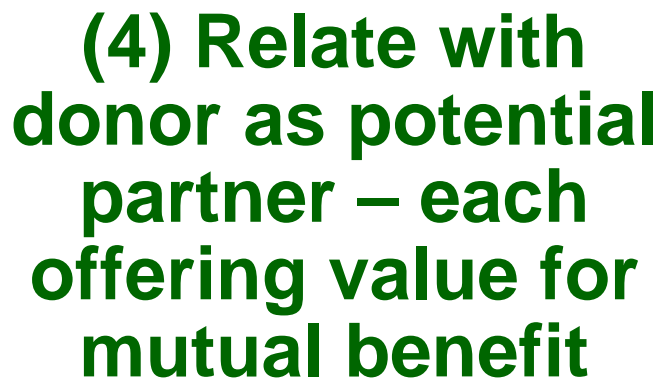
Some Tips For Seeking Funding



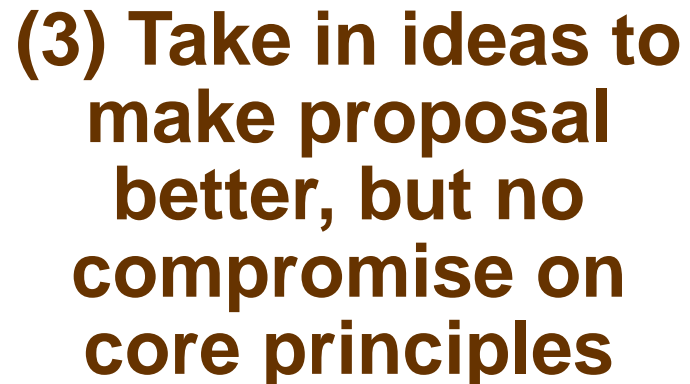
(1) Understand donor's mandate and programmes – Look for areas of mutual interest



(2) Offer new models but also show achievable outcomes and how to attain them



(4) Relate with donor as potential partner – each offering value for mutual benefit



(3) Take in ideas to make proposal better, but no compromise on core principles

In Summary



CDIO in S.T.E.M. Education supports Economic Growth

Donors can and should support capacity in CDIO and S.T.E.M.

Host Community + Content Leader + Donor = “Win³ Partnership”

CDIO 2016, Turku, Finland

Host Community moves
towards sustained
economic development

WIN-WIN-WIN

Content Leader
(Singapore Polytechnic)
expands knowledge

Donor or Funder
(Temasek Foundation)
fulfils mandate

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