

Asia-Pacific Metrology Programme (APMP)  
Developing Economies' Committee (DEC)

**Report of the**  
**2<sup>nd</sup> DEC Strategic Planning Workshop**  
*also incorporating outputs from pre-Workshop planning*

***28 November & 1 December 2019***

**Sydney, Australia**

Submitted by

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# CONTENTS

Abbreviations and Acronyms .....	3
1. Introduction .....	4
1.1 Context, Workshop Objectives and Program .....	4
1.2 Workshop Participants .....	4
2. Session 1 Proceedings, 28 November 2019 (Thursday) .....	4
2.1 Introduction of Participants and Expectation Check .....	4
2.2 Opening Remarks, Review of Cebu outputs, Workshop 2 Objectives: DEC Chair .....	5
2.3 Post-Cebu and Pre-Sydney Workshop Preparatory Steps .....	5
2.4 The Systems Map .....	6
2.5 Draft Vision Statement .....	7
2.6 Leverage Areas .....	8
2.7 Systems Change “if-then” Hypotheses .....	9
2.8 End of Session 1 Feedback .....	11
3. Session 2 Proceedings, 1 December 2019 (Sunday) .....	12
3.1 Welcome, including Acknowledgement of Country & Opening Remarks, DEC Chair .....	12
3.2 Session 1 outputs on Strategic Thinking, Learning and Acting .....	12
3.3 Prioritized Interventions and Initial Implementation Plans per Taskforce .....	12
3.3.2 Monitoring and Evaluation Taskforce Priorities, Milestones, Responsibilities .....	13
3.3.3 KMS Taskforce Priorities, Milestones, Responsibilities .....	14
3.3.4 Focus Group Taskforce Priorities, Milestones, Responsibilities .....	15
3.3.5 CMCs Taskforce Priorities, Milestones, Processes .....	15
3.4 Next Steps and Closing .....	17
ANNEXES .....	18
Annex 1 Workshop Program .....	18
Annex 2 List of Participants .....	19
Annex 3 Systems Thinking Guiding Thoughts .....	21

## Abbreviations and Acronyms

APMP	Asia-Pacific Metrology Programme
APLMF	Asia Pacific Legal Metrology Forum
BIPM	International Bureau of Weights and Measures
CMC	Calibration and Measurement Capability
COOMET	Euro-Asian Cooperation of National Metrological Institutions
CRM	Certified Reference Material
DEC	Development Economies' Committee
DEN	Developing Economy NMI
EC	Executive Committee
FG	Focus Group
GA	General Assembly
KMS	knowledge management system
M&E	monitoring and evaluation
MoU	Memorandum of Understanding
PDCA	Plan, Do, Check, Adjust cycle
PNG	Papua New Guinea
PTB	Physikalisch Technische Bundesanstalt
QS	Quality System
SDG	Sustainable Development Goal
TC	Technical Committee
TCQS	Technical Committee for Quality Systems

## Introduction

### 1.1 Context, Workshop Objectives and Program

This is the second of two (2) Strategic Planning Workshops conducted by the Developing Economies' Committee (DEC) of the Asia-Pacific Metrology Programme (APMP). The first workshop was held in Cebu, the Philippines, from 17-18 June 2019 (see Report [here](#)). Through the course of the two Workshops, DEC members worked together to identify key issues and elements for the DEC's next multi-year Strategic Plan.

Between the Cebu and Sydney workshops, a smaller group of DEC members, supported by PTB consultants/coordinator, used the data gathered from the first workshop to map out the strategic issues identified, formulate a draft DEC vision statement, identify five (5) "leverage areas" to address strategic issues and draft strategic change hypotheses for these areas. The outputs were presented and discussed in two half-day sessions on 28<sup>th</sup> of November and 1<sup>st</sup> December 2019 during the annual APMP meetings in Sydney, Australia. The main outputs of the workshop are intended to comprise the main elements of the DEC's next multi-year Strategic Plan. The Workshop outputs were presented and discussed during the DEC meeting sessions and also presented to the 35<sup>th</sup> APMP General Assembly during the Sydney APMP meetings.

*Please see Annex 1 - Workshop Program.*

### 1.2 Workshop Participants

Session 1 of the DEC Workshop involved 31 participants, with a gender balance of ~44% female to ~56% male and Session 2 involved 36 participants, with a gender ratio of ~50%/50%, broadly indicative of the level of gender diversity within the DEC. The economies represented were Australia; Bangladesh; Bhutan;<sup>1</sup> Cambodia; China; Egypt; Hong Kong, China; India; Indonesia; Japan; Jordan; Kiribati;<sup>1</sup> Rep. of Korea; Malaysia; Mongolia; Nepal; Papua New Guinea; Philippines; South Africa; Sri Lanka; Thailand; and Vietnam.

DEC Chair, Dr Angela Samuel, led the Workshop, supported by the pre-Sydney preparatory team members – Dr Mala Khan (Bangladesh), Mr Joe Panga (PNG), Mr Manish Kumar Das (Nepal), Mr Abdul Rashid Bin Zainal Abidin (PTB Consultant), and Ms Corinna Weigelt (PTB Project Coordinator).

Mr Andy Henson, BIPM Director of the International Liaison and Communication Department, participated in both sessions of the workshop. APMP Chair Dr Toshiyuki Takatsuji, EC members Ms Ajchara Charoensook and Dr Osman Zakaria and Lead TC Chair Dr Chu-Shik Kang participated in the first session. Dr Victoria Coleman, Chair of APMP's Technical Committee for Materials Metrology and the two APMP Secretariat officers, Dr Takehiro Morioka and Ms Mikiko Akaoka also participated in Session 1 as did Ms Laurie Winkless (NZ) as an invited observer.<sup>2</sup>

Workshop facilitator Ms Carmela Ariza guided the group. Mr Yusuf Khan and Dr Greg Harrington (both of NMIA) documented Session 1 and Session 2 respectively. A team from NMIA provided administrative and logistical support.

*Please see Annex 2 – List of Participants.*

## Session 1 Proceedings, 28 November 2019 (Thursday)

### 2.1 Introduction of Participants and Expectation Check

Ms Ariza invited participants to introduce themselves and to share their expectations. Given that some participants in the Cebu workshop did not take part in the Sydney workshop and some Sydney workshop participants were not at the Cebu workshop, it was important to set the workshop context.

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<sup>1</sup> Not an APMP member at the time of the Workshop.

<sup>2</sup> Ms Winkless presented to participants on a Workshop she will be facilitating in 2020 on "Case Studies: How to tell better metrology stories".

## 2.2 Opening Remarks, Review of Cebu outputs, Workshop 2 Objectives: DEC Chair

Dr Samuel provided a brief opening presentation, introducing this second Workshop as building on the outputs from the first Strategic Planning Workshop as well as the Focus Group (FG) Awareness Raising workshop (see Table 1). She explained that the aim of this second workshop was for DEC members to identify the key strategies and activities for the DEC to achieve its agreed vision in the next 5 or so years. She emphasized that the effectiveness of the DEC relies on all members.

**Table 1 Issues covered in Strategic Planning Workshop 1 and FG Awareness Raising Workshop, June 2019**

<b>Topics covered in first Strategic Planning Workshop, 17 to 18 June 2019</b>	<ul style="list-style-type: none"> <li>• What makes DEC members proud of the DEC</li> <li>• Mapping the DEC’s journey and member NMI milestones, accomplishments, key activities from 2000 to 2019</li> <li>• Relevant global and regional trends</li> <li>• Systems and stakeholder analysis</li> <li>• DEC scope of work / core business</li> <li>• DEC resources – existing and needing updating</li> <li>• DEC Measures of success</li> <li>• DEC strengths, weaknesses, opportunities and threats</li> <li>• DEC strategic issues</li> </ul>
<b>Outputs of the FG Awareness Raising workshop held in Cebu City, 19 June 2019</b>	<ul style="list-style-type: none"> <li>• Priority topics for FGs and relevant to DENs</li> <li>• How to improve the FGs to serve developing NMIs better</li> <li>• Knowledge management system (KMS) features</li> </ul>

## 2.3 Post-Cebu and Pre-Sydney Workshop Preparatory Steps

PTB Coordinator, Ms Corinna Weigelt, shared the processes undertaken by the pre-Sydney preparatory team members and the corresponding outputs: 1) development of an issues systems map, 2) formulation of the draft DEC vision and objectives statements, 4) five leverage areas, and 5) if-then systems change hypotheses. These outputs were to be presented for discussion and deliberation by DEC members in this second workshop.

Ms Ariza reminded participants of the guiding thought she had presented at the Cebu Strategic Planning workshop.

**Guiding thought: Strategic Planning Workshop 1, Cebu**

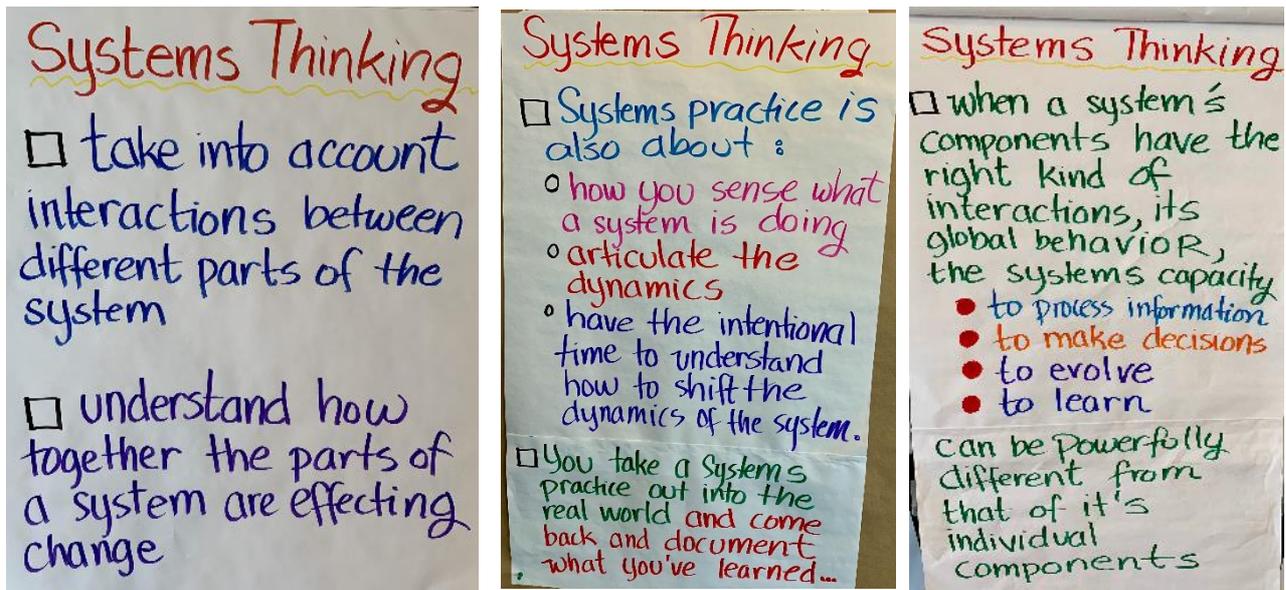
*Strategic planning is not the same as strategic thinking, acting, and learning. What matters most is strategic thinking, acting and learning. Strategic planning is useful only if it improves strategic thought, action and learning; it is not a substitute for them. (Bryson, John, 2004)*

Dr Samuel and Mr Rashid (PTB Consultant) explained the approach that the Sydney preparatory team had employed and the basic concepts that guided the team (see Photos below for key ideas presented and also Annex 3 for the handout on “Systems Thinking” guiding thoughts distributed to participants). They noted that it is important to understand the components of the DEC as a system and to look at how these interact. The DEC needs to process 19 years of experience and data and use these to make decisions to grow and learn.

A question for DEC members to work on is: *How do we translate the DEC’s work to what we can adapt/ adopt at the national level to develop our own economies?*

## 2.4 The Systems Map

A printed copy of the systems map (Figure 1) was distributed to participants. This was colour coded to correspond to the strategic issues identified in Cebu. Ms Ariza explained that the map shows the relationship between issues, factors, forces, weaknesses and challenges identified in the Cebu workshop. Instead of a listing of isolated issues or forces, understanding the DEC system entailed putting together the map to help members



better understand how different factors or forces relate to each other, reinforce each other, and importantly create patterns of interaction or system dynamics.

Ms Ariza also pointed out that the forces or factors in the map can help explain the "strategic issues" identified in Cebu. By understanding the DEC's dynamics, the Sydney preparation team was able to envision the transformation of the DEC (as described in the vision statement). Furthermore, the systems map helped the Sydney preparation team identify places in the DEC system (i.e., "leverage areas") that if, engaged, could shift the DEC system towards the desired transformation.

**DEC Chair, April 2020:** Please note that the Systems Map was developed from brainstorming undertaken at the 2019 mid-year meetings when the first 19 years of DEC activity was reviewed. It is not intended to discount in any way the excellent work that has been undertaken over the history of the DEC. Rather it identified in broad terms key areas and issues that the DEC can focus on going forward to improve its effectiveness to achieve agreed short-medium and long terms goals.

# SYSTEMS MAP: DEC DYNAMICS and STRATEGIC ISSUES

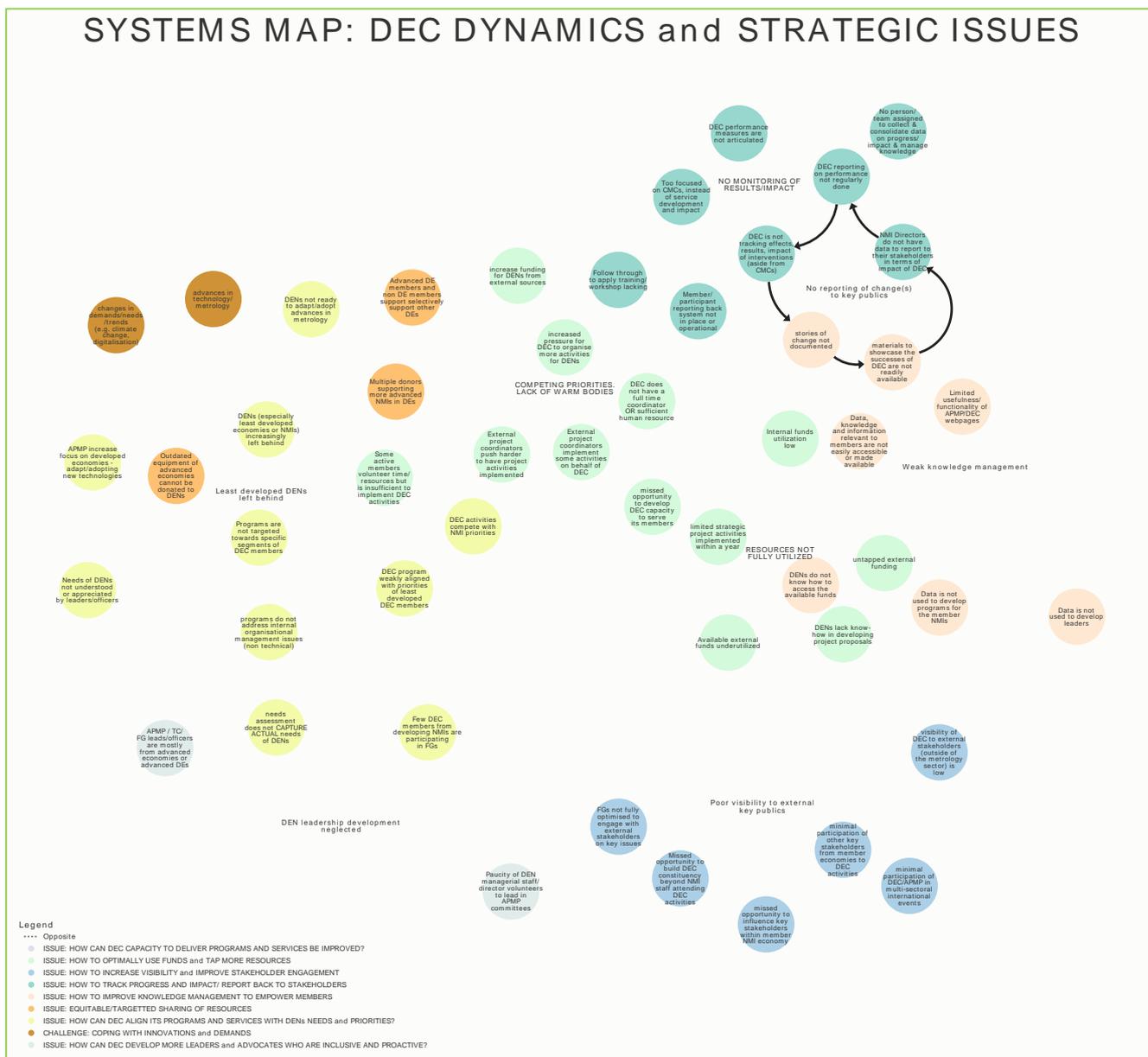


Figure 1 Systems Map

## 2.5 Draft Vision Statement

Dr Samuel presented the draft vision statement shown below.

**“A sustainable DEC that strives to benefit society through improved accountability, learning, and operational excellence, as well as empowering and developing capabilities of DEN members.”**

In the ensuing discussion, suggestions included:

- 1) Acknowledgement of what is within and what is outside the DEC’s scope (“the DEC is a facilitation tool”);
- 2) Addressing real needs of developing NMIs that are aligned with national priorities;
- 3) Improving national systems to help develop collective systems (like the DEC);
- 4) Creating awareness of metrology;
- 5) Sharing among members; and
- 6) Supporting least developed member NMIs.

Ms Betiota (Kiribati) noted the importance that the vision statement be relevant to all DEC members and be inclusive. She agreed with the notion of empowering DEC members. She added that Kiribati's metrology capabilities are at an immature stage and that it needs empowering programs. Mr Rashid reminded members that, as well as the DEC's roles and responsibilities, each NMI has responsibilities and accountability to provide input to DEC activities.

Dr Zaid asked about the direct benefit of improved accountability and whether this learning applies to DEC NMIs individually or whether the main objective is to benefit society. Ms Ariza suggested that the main objective is to benefit society but a secondary objective is to strengthen the DEC because individual NMIs and the DEC are interlinked. The DEC is a membership-based organisation and the strength of the DEC lies in its members.

Mr Henson recommended that NMIs understand what their Government's objectives are with respect to the UN's Sustainable Development Goals (SDGs), and demonstrate their alignment with Government priorities in seeking support. Mr Panga (PNG) responded that some NMIs are part of bigger organisations and it can be challenging to come up with a plan aligned with the SDGs if this does not fit with the larger organisation's plans. This could mean that those NMIs are unable to fully benefit from programs at this level. Dr Samuel noted this and advised that the task for the DEC Chair is to ensure that, as we report on what we are doing, we are mindful that our bosses/leaders understand the outputs so that they can see how they align with the larger organisation's broader objectives.

Mr Masuku (South Africa) noted that "creating awareness" is missing from the vision. He informed the group that in the Southern African Development Community (SADC), while most NMIs are in the process of developing National Quality policies, there are no substantial policies covering metrology. The National Metrology Institute of South Africa (NMISA) has assisted other SADC economies in raising awareness of metrology in order for those economies to develop metrology legislation.

*DEC Chair, April 2020: I have tried to incorporate the suggestions from the group discussion above in a revised version of the Vision Statement below – for your consideration (see Action statement at end of Report):*

**"A sustainable and inclusive DEC working collaboratively to benefit society across its agreed scope of activities through improved accountability, learning, and operational excellence, raising awareness and empowering and developing capabilities of all DEN members to address real needs that are aligned with national priorities."**

## 2.6 Leverage Areas

### **Guiding thought 2: Strategic Planning Workshop 2, Sydney**

**WHAT IS LEVERAGE? Identifying Opportunities for Impact** - To create something that will be taken up by the system and have an outsized effect relative to the amount of effort you put in. These kinds of opportunities are called leverage.

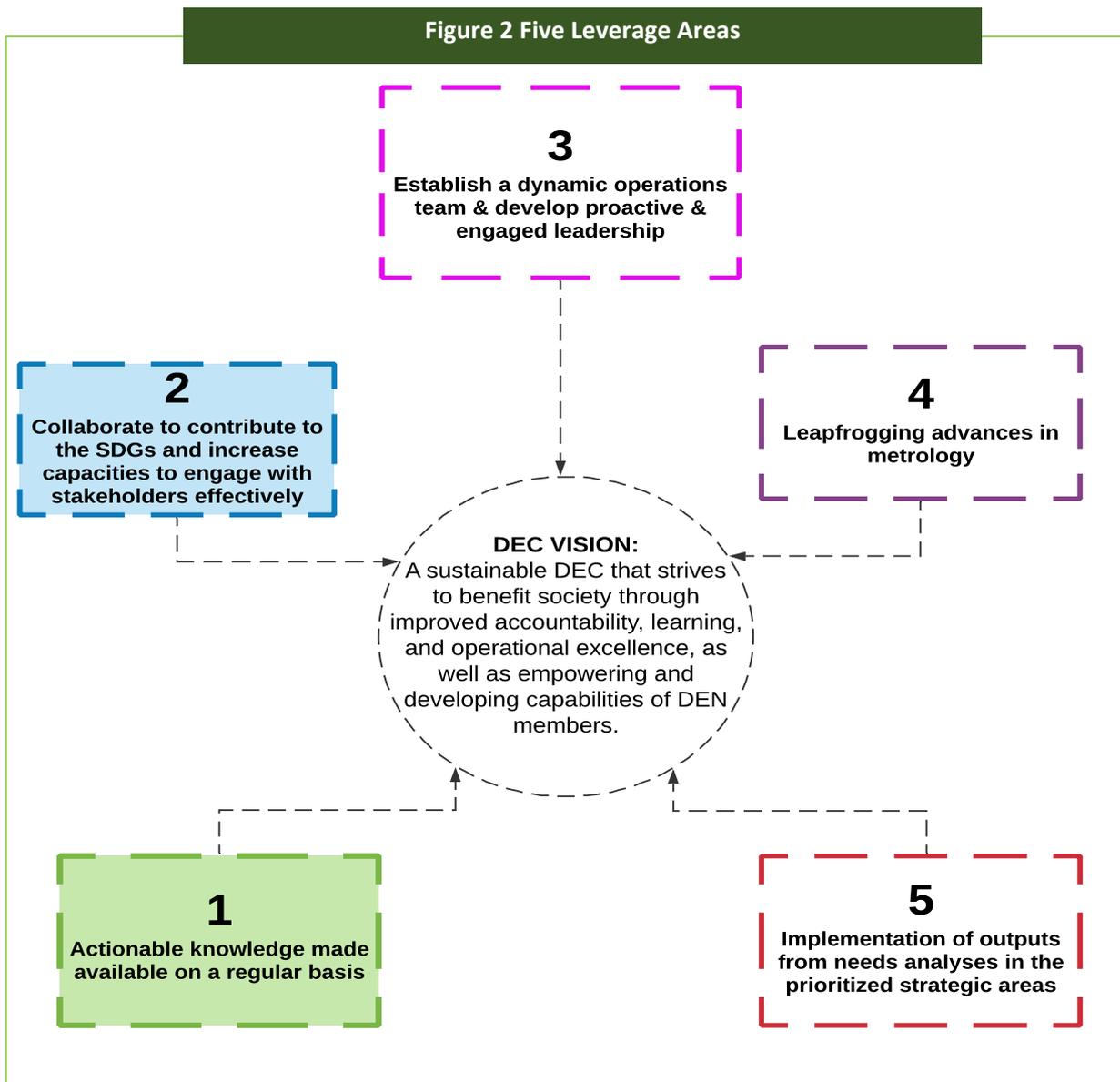
Leverage is a phenomenon where small effort result in outsized impact. When one exploits areas of leverage in a system by affecting key dynamics it can result in wider ripple effects that ultimately help the system to change itself.

Areas of leverage are places in the system where there is the possibility that one could have a big impact on the system with comparatively modest effort or investment.

Ms Ariza introduced the second guiding thought – on leverage areas.

Please also see Annex 3 – Participant hand-out: Systems Thinking Guiding Thoughts.

Ms Weigelt then presented the five leverage areas that the Sydney preparatory team had developed. She explained that, based on the systems map, a systems change hypothesis was developed for each leverage area. Dr Samuel noted that the hypotheses are to be used to develop the multi-year strategic plan. They will help identify what is relevant and can be used for work packages in short, medium, and long term activities. Ms Ariza suggested that NMIs identify issues in their respective systems where modest input or engagement has the potential to be taken up and amplified by the system.



## 2.7 Systems Change “if-then” Hypotheses

Ms Ariza walked participants through the hypothesis for the first leverage area in plenary to help them understand what a systems change “if-then” hypothesis is. Participants then discussed the remaining 4 hypotheses in small groups, facilitated by the Sydney preparation team members.

The two guide questions in this session were:

- Is this a leverage area that will shift the DEC system closer or towards the vision?
- Do you think these work packages will help achieve the identified short, medium, and long term-impacts?

The 5 hypotheses are shown in the attached document “DEC Systems Change Hypotheses for Leverage Areas 1 to 5”. Discussion highlights follow.



Participants discuss the systems if-then change hypothesis that are displayed on boards with graphic representations of the desired changes in the DEC system.

### **Discussion Highlights**

**General comments:** Mr Henson counselled that, in developing the plan and work packages, it is important to build on work that has been or is being done. He also recommended that the top aspiration identified with “Fundamental DEC systems change” be an external one rather than one that is focused on the DEC.

Mr Rashid noted that the original nine leverage areas have been consolidated to five. Dr Samuel added that the key value of systems thinking is that it highlights the importance of sustainability. The intention is to make this a part of a system that will be sustainable so that new economies joining APMP are able to learn from a systemic approach.

Discussion Points	
<b>Leverage Area 1:</b> Actionable knowledge made available on a regular basis	1. (Dr Takatsuji) Engagement of NMI directors should be an initial outcome (not a later impact) 2. Beneficiaries of the KMS should be clearly identified. 3. The SDGs, translated into each economy’s national objectives, are major drivers for the priorities and plans of each NMI. The NMI should in turn inform the DEC of its plans and priorities and how these link with their national SDG targets and priorities.
<b>Leverage Area 2:</b> Collaborate to contribute to SDGs and increase capacities to engage with stakeholders effectively	1. Additional points for Fundamental DEC Systems change: <ul style="list-style-type: none"> <li>○ Export commodities (prepackaged goods)</li> </ul> 2. Additional points for work packages: <ul style="list-style-type: none"> <li>○ Develop tools to help link FGs with SDGs, strategic plan, targets and CMCs</li> <li>○ Understand audience and tailor messages for them.</li> </ul>
<b>Leverage Area 3:</b> Establish a dynamic operations team and	1. Additional points for Fundamental DEC Systems change: <ul style="list-style-type: none"> <li>○ Monitor delivery of processes and assess impact.</li> </ul> 2. Additional potential impacts on DEC dynamics:

develop proactive and engaged leadership	<ul style="list-style-type: none"> <li>○ M&amp;E from stage to stage</li> <li>○ Metrology infrastructure for LDCs</li> <li>○ Human resources to implement DEC activities</li> </ul> <p>3. Additional Initial Outcome (Mr Henson):</p> <ul style="list-style-type: none"> <li>○ NMI Directors reward staff when they are prepared to undertake roles that involve more than just laboratory work.</li> </ul>
<b>Leverage Area 4:</b> Leapfrogging advances in metrology	<p>1. Additional points for Fundamental DEC Systems change:</p> <ul style="list-style-type: none"> <li>○ DEC NMIs must understand their own journey and cannot expect the DEC to provide historic data of the NMI.</li> </ul> <p>2. DEC cannot do the groundwork for NMIs.</p>

*DEC Chair, May 2020: These points have been brought into the draft Implementation Plan.*

## 2.8 End of Session 1 Feedback

It was recognized that active participation, communicating the strategy to stakeholders, and commitment and integration of DEC activities into national plans are necessary for the successful implementation of the DEC strategy.

Dr Zakaria (Malaysia) appreciated the process, adding that now the DEC needs to use these ideas to submit proposals to take these outputs forward. Mr Das (Nepal) asked how the systems approach could be used at policy and strategic levels.

Dr Takatsuji praised the enthusiasm of the group, noting the creativity and collaboration during the workshop. He expressed a concern that, after the workshop, participants could forget a lot of the good ideas generated. He urged the group to keep communicating with each other as the easiest way to implement the ideas generated was through communication.

Mr Rashid reflected that if he was still an NMI Director, he would now be thinking about how he could utilise the leverage areas and incorporate them into his NMI's national metrology plan. He noted that the work presented at the meeting was very important for the next five years of development.

Ms Betiota thanked the facilitator and the DEC for the opportunity to participate in the workshop. She noted that, with new metrology legislation to be established in Kiribati in 2020, the workshop had been very important. She appreciated the clarity around short, medium, and long term strategies and the vision and will discuss and share these with her team and stakeholders.

Ms Ariza then informed the group that the task for Session 2 on Sunday would be to look at the five leverage areas and prioritise the ones to be included in each economy's strategic plan.

Dr Samuel concluded the first session of the workshop by thanking everyone for the work both in Cebu and today to help develop a DEC strategic plan for the next few years. Ms Ariza set homework for the group by asking two questions:

- Is this a leverage area that will shift the DEC System towards the vision/ guiding star?
- Do you think these work packages will help achieve the short-term medium-term and long-term impacts?

**Session 1 of the workshop concluded at 1:30pm.**

## Session 2 Proceedings, 1 December 2019 (Sunday)

### 3.1 Welcome, including Acknowledgement of Country & Opening Remarks, DEC Chair

Dr Samuel welcomed participants and explained what transpired in the first session of the workshop since some participants had not participated in this. She also reminded everyone that the expected output of this workshop is to have the key elements of the DEC's next multi-year strategic plan, with identified strategic issues milestones, and implementation plans. She will be calling for volunteers to help work on the agreed DEC Taskforces to take ownership of implementation of each strategic issue.

### 3.2 Session 1 outputs on Strategic Thinking, Learning and Acting

Between them, Dr Samuel and Ms Weigelt re-presented the draft DEC Vision statement, the systems map with critical issues and linkages, the 5 leverage areas, and the if-then hypotheses. Ms Ariza summarized some key thoughts arising from the discussion in Session 1 to guide the DEC's strategic thinking, learning and acting.

#### **Guide for Strategic Thinking, Learning and Acting**

(summarized from discussions in first half-day workshop)

- *We acknowledge that our diversity in development, knowledge, resources and values is our strength and opportunity. We grow by collaborating with and supporting each other, facilitating these processes and provides the space for our members to grow.*
- *We recognize that national priorities might differ and that not all DEC members will be focusing on the same issues or topics or starting from the same place.*
- *A strength of the DEC is to be able to identify similar needs, priorities and goals that we can work on together.*
- *Member NMIs are encouraged to align the measurement capabilities and services that they develop and deliver with achievement of the Sustainable Development Goals prioritized by their Governments.*
- *Strategic issues and activities of the DEC should align with national strategic plans and priorities, wherever possible, to add value to the implementation of national strategies and the development and metrology within the economy (organizational, individual level).*
- *Once finalised, the DEC (encompassing all members) is responsible for implementation of the DEC Strategic Plan, including assessing and reviewing objectives, successes and lessons learned and adjusting the Plan accordingly.*

### 3.3 Prioritized Interventions and Initial Implementation Plans per Taskforce

The Sydney preparation team had clustered the key interventions discussed in Cebu and in Session 1 of the Sydney Workshop for each leverage area. These were presented in plenary.

The strategic issues allocated to the four DEC Taskforces identified in Cebu were: Monitoring and Evaluation; Knowledge Management System; CMCs; and Focus Groups. Participants were invited to nominate to work in small groups on one of these issues. Outputs from these breakout group discussions are presented in the following section. After working in the small groups, participants were asked to volunteer to work in a particular Taskforce.

***DEC Chair, April 2020: Using the original clustering of interventions by the Sydney preparation team, I have now incorporated the Work Packages identified for the 5 Leverage Areas to create the draft DEC Strategic Priorities & Implementation Plan. As such, I have re-ordered the Taskforces as follows: 1) DEC Leadership and Management Development; 2) Monitoring & Evaluation; 3) Knowledge Management System; 4) CMCs; 5) Focus Groups; and 6) Future proofing (re-named Taskforce/Strategic Issue). Tasks not discussed in detail at the workshop but identified through the Leverage Area work are highlighted in red text in the draft Implementation Plan.***

### 3.3.2 Monitoring and Evaluation (M&E) Taskforce Priorities, Milestones, Responsibilities

Key priorities	Leverage Area	Milestones	Target Period of Implementation	Responsibilities of the Taskforce
Develop, test, launch, apply and maintain a transparent M&E system for DEC	1	Collect and share: <ul style="list-style-type: none"> <li>existing M&amp;E systems to develop best practice for the DEC</li> <li>what the DEC has done to date in monitoring and evaluating activities strategic plans of DENs</li> </ul>		<ul style="list-style-type: none"> <li>Ensure that the DEC M&amp;E system identifies benefits to the community/society derived from DEC activities</li> <li>Monitor the needs and progress of least developed NMIs</li> <li>Ensure results are used – DEC responses to M&amp;E findings</li> <li>Include lessons learned in M&amp;E system – a balance of quantitative and qualitative indicators</li> </ul> <p><b>Lead:</b> DEC Chair  <b>Members:</b> DEC Coordination Committee (CC): Gao Wei, A Charoensook, G Zaid <i>plus</i> national contact points (KRISS, NIMT, etc)</p>
		Draft general guidelines (content: KPIs, rewards – e.g. APMP as well as national recognition to DENs (including directors), consequences of M&E, to then be implemented by other Taskforces and the DEC as a whole	March 2020	
		Finalise guidelines	Mid-year 2020	
		Obtain endorsement of guidelines from appropriate APMP organ (EC or GA)	Annual 2020 meetings	
		Review M&E annually – DEC Chair and CC		
		Apply PDCA (plan-do-check-adjust) cycle to the results of annual reviews (e.g. increase support in certain areas, revise priorities)		
Ensure NMIs are integrating aspects of the DEC M&E into their own M&E processes	1	Develop network of M&E contacts within each DEC member NMI		
		Raise awareness of M&E processes (respective DENs)		
		Provide training on general principles of M&E		
Coordinate with internal and external stakeholders for M&E requirements	1	Conduct survey by peer DENs (feeding into KMS)		
		Seek and incorporate inputs from TC Chairs/FG Chairs/EC into the M&E		
		M&E to provide data to KMS Taskforce to share with members and other stakeholders		

### 3.3.3 KMS Taskforce Priorities, Milestones, Responsibilities

Key priorities	Leverage Area	Milestones	Target Period of Implementation	Responsibilities of the Taskforce
Map services/expertise/ PTs/comparisons offered by members	1	Design the survey on the usefulness of data –include questions for each topic area and the desired outcomes of the survey.	2021	<b>Lead:</b> Manish Das, NBSM <b>Taskforce volunteers:</b> Diane Ignacio, ITDI-Philippines C M Tsui, SCL HongKong Sophors Em, NMC Cambodia P Drijirikara, BSN Indonesia Greg Harrington, NMIA Australia <a href="#">APMP Secretariat proposed to support the KMS Taskforce</a> (NB: Bhutan also volunteered for this Taskforce; as a non-APMP member, the nature of their participation will be confirmed with the Taskforce lead.)
		Identify the right person to answer the survey.		
		Conduct the survey.		
		Analyse and present the data.		
		Validate the outcomes.		
		Set up a sustainable mechanism to ensure the quality of the data/information/knowledge		
KM platform – web portal – link to existing information (do not duplicate_				
Collect case studies, success stories and other relevant materials and publish in Joint APLMF/APMP web portal	1	Brainstorm and select potential stories from NMIs	2020	
		Select workshop/success story/case study writeshop participants		
		Conduct and participate in writeshop		
		Publish success stories/case studies and other materials on the web portal.		
		Promote available knowledge products.		
Map resources and provide updated information on how to access resources	1	Decide on resources – survey output plus others		
		Design the survey on the usefulness of data –include questions for each topic area and the desired outcomes of the survey.		
		Identify the right person to answer the survey.		
		Conduct the survey.		
		Analyse and present the data.		
		Validate the outcomes.		
Support all DEC Taskforces in developing, publishing knowledge products on web portal and communicating	1	Inform other Taskforces about the KMS		
		Encourage sharing of success stories and knowledge		

relevant information in real-time				
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### 3.3.4 Focus Group Taskforce Priorities, Milestones, Responsibilities

Key priorities	Leverage Area	Milestones	Target Period of Implementation	Responsibilities of the task force
Develop a long term plan for FGs - Joint TC-DEC-FG activity	2	Needs analysis to prioritize and review if current topics are still relevant		<ul style="list-style-type: none"> <li>Facilitate the implementation of the work plan with the support of the NMIs</li> <li>Provide inputs to DEC planning re: lessons learned, opportunities arising from FGs</li> <li>Regularly update plans, follow-up and monitor</li> <li>Suggest performance measures and indicators</li> </ul> <p><b>Lead: Joe Panga, NISIT</b></p> <p><b>Taskforce Volunteers (TBC):</b></p> <ul style="list-style-type: none"> <li>K Betiota, Kiribati (<i>became an APMP member at the 35<sup>th</sup> GA</i>)</li> <li>A Widarta/N Saito, NMIJ</li> <li>S Akuranthilaka, MUSSD</li> <li>T Nontachart, NIMT</li> <li>Dr Li Jinyuan/ Ms Rui Wang/Ms Liuyuing Yan, NIM</li> </ul>
		Draft long-term plan		
		Obtain approval of plan for FGs		
Develop FG awareness raising design/concept	2	Identify needs of stakeholders in each economy		
		Draft and obtain approval of action process design		
		Conduct FG awareness raising workshop(s)		
Implement FG activities involving multiple stakeholders	2	Process design		
		MoU with national and international stakeholders – agree on financial support/Knowledge Products (KPs)		
		Conduct workshops/joint projects		
Develop KPs from FGs	2	DENs and stakeholders have to agree on knowledge products		
		Develop the KPs (manuals, guides, Standard Operating Procedures, training, etc.)		
		Have an FG web link in the KMS/communicate about new KPs to members		
Reflect on and share lessons learned from/impact of FGs	2	Design the reflection session		
		Run reflection/lessons learned session among FG members		
		Integrate lessons learned in NMI and DEC work plan		

### 3.3.5 CMCs Taskforce Priorities, Milestones, Processes

Key priorities	Leverage Area	Milestones	Target Period of Implementation	Processes to be considered
Assist members in developing their own roadmaps to CMCs, with checklists. Use the outputs from needs assessments to identify priority areas for CMCs.	3 & 5	Establish the Taskforce		<ul style="list-style-type: none"> <li>• Help 9 NMIs:               <ul style="list-style-type: none"> <li>○ determine why they need CMCs – what value does this offer their economy</li> <li>○ Understand how their economy works</li> <li>○ Identify the Unique Selling Point (USP) in having CMCs</li> <li>○ Focus on what matters most</li> <li>○ Link to national SDG targets</li> </ul> </li> <li>• Take this as an opportunity to influence the Meter Convention and get a seat at the table</li> <li>• Support accredited laboratories (70,000) with CMCs as references</li> </ul> <p><b>Lead:</b> Dr Mala Khan, DRiCM</p> <p><b>Taskforce Volunteers (TBC):</b></p> <ul style="list-style-type: none"> <li>• Rina Sharma, NPLI</li> <li>• Donald Masuku, NMISA</li> <li>• Md Jaydul Islam, BSTI</li> <li>• Hoang Cong Duy, VMI</li> </ul>
		Study the problems in the 9 economies without CMCs – develop questionnaire to identify common needs	Before mid-year – complete the survey	
		Share the status of the 9 economies (study results)	Mid-year APMP	
		Work with TCs and QS on how to address issues		
		Assist members apply to the BIPM for membership of the Metre Treaty (Long-term goal: Associate Membership/Member State of the BIPM)	2021: At least 3-4 economies apply for 1 CMC; minimum target = 1 NMI	
Introduce laboratory information system	3 & 5			
Organize comparisons / hybrid comparisons and peer assessments in the priority areas for CMCs. Develop success stories from hybrid comparisons to assist others.	3 & 5			
Link to BIPM expertise	3 & 5			
Utilize experts in DEN2DEN competency needs service	3 & 5			

### 3.4 Next Steps and Closing

Participants agreed on the following immediate next steps:

- Consolidate outputs into a strategic plan and circulate to all members for feedback – **DEC Chair**
- Firm up Taskforce leads and members – **DEC Members, by 15 May 2020**
- Taskforces to develop and implement work plans – **Taskforce leads** to drive, with set timeframes
- Finalize strategic plan – **DEC Chair, before 2020 mid-year meetings**
- Agree on approval/adoption process – **DEC Chair with EC, before 2020 mid-year meetings**

Dr Samuel thanked participants and everyone who supported the preparation and organization of the two workshops. She also informed everyone that the outputs were to be discussed in the DEC meeting and presented at the 35<sup>th</sup> General Assembly on 5-6 December.

The workshop was closed at around 1230pm.

## ANNEXES

### Annex 1 Workshop Program

#### SESSION 1, 28 November 2019

<b>TIME</b>	<b>SESSION</b>
08:30	Registration
08:45	Introduction of participants and expectation check: Carmela Ariza
9:00	Opening remarks, Review of Cebu outputs, Workshop 2 Objectives: Angela Samuel, DEC Chair
09:20	Post-Cebu and Pre-Sydney Workshop Preparatory Steps: Corinna Weigelt, PTB
09:45	The Systems Map
10: 15	Draft Vision Statement
10:30	<i>Coffee break + Group Photo</i>
10:50	Presentation and Discussion of “Leverage Areas” to shift to a healthier DEC system – selected priority areas for the DEC to focus on over 2020-202x and initial if-then statements
11:10	Group work on Leverage Areas and if-then statements
12:30	Summary of Day 1 outputs, what will happen in Day 2 and Closing
12:45	<i>Lunch break</i>

#### SESSION 2, 1 December 2019

<b>TIME</b>	<b>SESSION</b>
08:30	Welcome, including Acknowledgement of Country; Opening Remarks: DEC Chair
08:40	Day Starters
08:45 - 9:10	Session 1 outputs on Strategic Thinking, Learning and Acting
9:10 – 10:10	Prioritised interventions and initial implementation plans per Taskforce
10:10 – 11:30	Small group work milestone planning
11:30 – 12:25	Presentation and discussion in plenary
12:25 – 12:30	Summary of Workshop Outputs and Next Steps
12:30 – 13:30	<i>Lunch break</i>

## Annex 2 List of Participants

### List of Attendees – DEC Session 1 only / DEC Session 2 only / BOTH DEC Workshop Sessions

Name	Gender	Economy	Role / Organisation
Dr Angela Samuel	F	Australia	DEC Chair
Dr Victoria Coleman	F	Australia	APMP TCMM Chair
Mr Yusuf Khan	M	Australia	NMIA (Minutes)
Dr Greg Harrington	M	Australia	NMIA
Mr Md Jaydul Islam	M	Bangladesh	NML-BSTI
Dr Mala Khan	F	Bangladesh	DRiCM
Mr Wangda Jamtsho	M	Bhutan	BSB
Mr Tenzin Dorji	M	Bhutan	BSB
Mr Sophors Em	M	Cambodia	NMC
Mr Kong Pangnarith	M	Cambodia	NMC
Dr Li Jinyuan	M	China	NIM
Ms Rui Wang	F	China	NIM
Ms Kelly Yan	F	China	NIM
Mr Shaker Abdelwahab Gelany	M	Egypt	NIS
Mr Andy Henson	M	France	International Relations, BIPM
Ms Corinna Weigelt	F	Germany	PTB Coordinator
Dr CM Tsui	M	Hong Kong, China	HKSCCL
Dr Rina Sharma	F	India	NPLI
Dr Ghufron Zaid	M	Indonesia	SNSU-BSN
Dr Praba Drijarkara	M	Indonesia	SNSU-BSN
Mr Asep Setiawan	M	Indonesia	SNSU-BSN
Dr Toshiyuki Takatsuji	M	Japan	APMP Chair
Dr Takehiro Morioka	M	Japan	APMP Executive Secretary
Ms Mikiko Akaoka	F	Japan	APMP Secretary
Dr Norio Saito	M	Japan	NMIJ
Dr Anton Widarta	M	Japan	NMIJ
Mr Mustafa	M	Jordan	JNMI
Ms Kammari Betiota	F	Kiribati	MCIC
Dr Chu-Shik Kang	M	Korea	KRISS
Mr Kangyoung Sung	M	Korea	KRISS
Ms Hyerin Park	F	Korea	KRISS
Mr Jin Wan Chung	M	Korea	KRISS
Mr Abdul Rashid bin Zainal Abidin	M	Malaysia	DEC Consultant
Dr Osman Zakaria	M	Malaysia	NMIM
Mr Bilguun Boldbaatar	M	Mongolia	MASM
Mr Dambasuren Davaa	M	Mongolia	MASM
Mrs Narangerel Dalaijamts	F	Mongolia	MASM
Mr Manish Kumar Das	M	Nepal	NBSM
Ms Laurie Winkless	F	New Zealand	DEC Consultant
Mr Joe Panga	M	Papua New Guinea	NISIT
Ms Carmela Ariza	F	Philippines	DEC Consultant
Dr Diane Ignacio	F	Philippines	NML-ITDI
Mr Manuel Ruiz	M	Philippines	NML-ITDI
Mr Donald Masuku	M	South Africa	NMISA
Mr Sujeewa Akuranthilaka	M	Sri Lanka	MUSSD
Ms Ajchara Charoensook	F	Thailand	Director, NIMT

<b>Name</b>	<b>Gender</b>	<b>Economy</b>	<b>Role / Organisation</b>
Mr Uthai Norranim	M	Thailand	NIMT
Ms Thanakporn Nontachart	F	Thailand	NIMT
Mr Cong Duy Hoang	M	Vietnam	VMI

Source: *Systems Practice*, Omidyar Group

## WHAT IS SYSTEMS THINKING? WHY IS IT IMPORTANT?

***“Systems thinking tries to take into account the interactions between different parts of a system and understand how together they are effecting change rather than simply trying to understand specific components in isolation.”***

-Kimberly Bowman in “Systems Thinking: An Introduction for Oxfam Program Staff”

***“The study of complexity has shown that when a system’s components have the right kind of interactions, its global behavior, the system’s capacity to process information, to make decisions, to evolve and learn can be powerfully different from that of its individual components.”***

-Melanie Mitchell in “How Can the Study of Complexity Transform Our Understanding of the World?”

***“A lot of your team members might think of Systems Practice as a mapping process,” she says, “But it is more than just building a map and landing on a strategy. It is also what you do to implement a strategy. Systems Practice is also about how you sense what a system is doing, articulate those dynamics, and then have the intentional time to understand how to shift them. You take a Systems Practice out into the real world and come back and document what you’ve learned.”***

- Elise Ford, Director, Humanity United

# WHAT IS LEVERAGE?

## Identifying Opportunities for Impact

To create something that will be taken up by the system and have an outsized effect relative to the amount of effort you put in. These kinds of opportunities are called leverage.

You'll use your map to begin to **identify places within your system where modest input or engagement has the potential to be taken up and amplified by the system**. These are the places where you can create disproportionate impact relative to your effort. If you can identify your leverage points and figure out how to engage them, you can start to shift systems.

Looking for a leverage point? **Start by letting the system guide you to the places to engage**. There will always be a temptation to gravitate towards the work you are already doing and declare that to be your leverage opportunity. Resist! In some cases your current work may align with future leverage opportunities, but you should try to *think critically, keep an open mind, and avoid jumping to the conclusions that seem obvious*.

Most importantly, let the system (by way of your map) tell you where the real opportunities for productive engagement lie! **"Listening" to what your map is telling you may help you better aim or re-structure how you pursue familiar activities**. Developing a hypothesis for where there can be leverage in your system provides the basis for better learning and adapting into the future (e.g. "is that great idea we had really so great in terms of catalyzing systems change?")

### LOOK IN YOUR SYSTEM FOR:

- Places where the system is frozen (these are to be avoided)
- Places where there is pent up energy for change
- Places that seemed like a mixed bag (there are some good things that are happening and some bad things)
- Places that seem like bright spot
- Places where there are high numbers of potential, positive ripple effects

Remember that if we take a systems perspective, we will realize that **we cannot create leverage ourselves**. However, we can find areas of leverage that exist in the system and use it to nudge the system to ultimately help it change itself.

**"Redesigning things at the systemic level offers us far more leverage to shape our future than simply reacting to events does."**

- Daniel H. Kim in "Introduction to Systems Thinking"

## **BUILD A SYSTEMS STRATEGY**

**“Good strategy takes a stance. It has explicit hypotheses. It asks ‘what is really going on here?’** It plans for ways to fail safe and admits uncertainties. It lays out coherent actions that focus on shifting a few critical dynamics. And it should be simple enough for those who aren't experts to follow...We should take the simplicity of our resulting strategy as a sign that we've embraced the complexity, understood it, and found a few key leverage points where we actually have a shot at making an impact.” - Jeff Mohr, CEO of Kumu.io

Here's how Jeff Mohr, CEO of the systems mapping platform Kumu, breaks down how good strategy and bad strategy can result from a systems practice. This is adapted from a blog post he originally wrote based on the work of Richard Rumelt and we're excerpting it here because we think you might find it useful as you start to craft your own strategies.

### **What to Avoid**

Here are the things to avoid as you develop your systems strategy:

**1. Mistaking goals for strategy:** Maps of complex systems, such as early childhood development or water conservation, naturally end up with lots of factors and sectors involved. As we engage stakeholders across the system in a participatory approach, sometimes just getting a "finalized" map and aligning around goals for our collective effort is a daunting enough challenge. But we do ourselves a disservice when we stop there.

We must be honest with ourselves. "Increase the number of children ready for kindergarten" is a goal, not a strategy. We must also avoid rationalizing stretch goals as strategy by using the gap between where we are and the desired future to drive action. It may motivate people, but that doesn't make it strategy.

**2. The inability to choose:** *Good strategy requires focus.* We can't do everything we'd like to, and we certainly can't do it all at the same time. Some of our favourite ideas will need to wait. We must focus on the big picture and coordinate our actions over time to maximize our resources the best we can. We must highlight the dominant loops within the system and focus on the critical factors. The bias from our research and understanding of the system should immediately be evident to anyone looking at the map. A neutral map, treating each factor and loop as essentially equal, is a map left unfinished.

**3. Failure to face the problem:** **Another stumbling block is people's tendency to map how they would like the system to function instead of how the system currently functions.** There are incredibly powerful forces at play in the current state that actively resist change. We cannot hope to change the system without first understanding those forces. Make sure to identify and analyze the obstacles preventing you from making an impact. David Stroh recommends we ask, "Despite our best intentions, why have we been unable to change?" If you don't take a hard, honest look at these challenges you're engaging in wishful thinking, not good strategy.