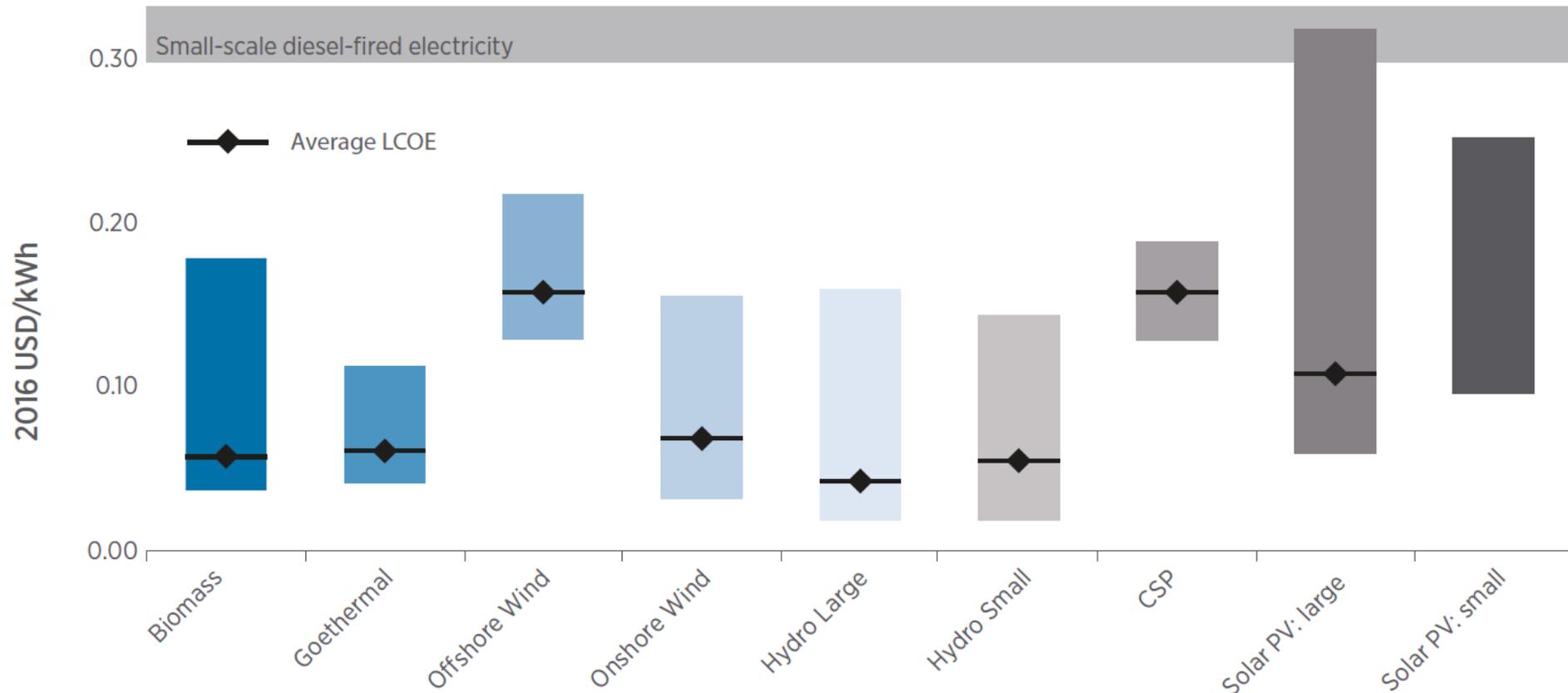


IRENA SIDS Lighthouses

European Parliament Intergroup:
Seas, Rivers, Islands and Coastal Areas

Roland Roesch: Brussels: 10. January 2018

Renewables: Low cost option for many islands



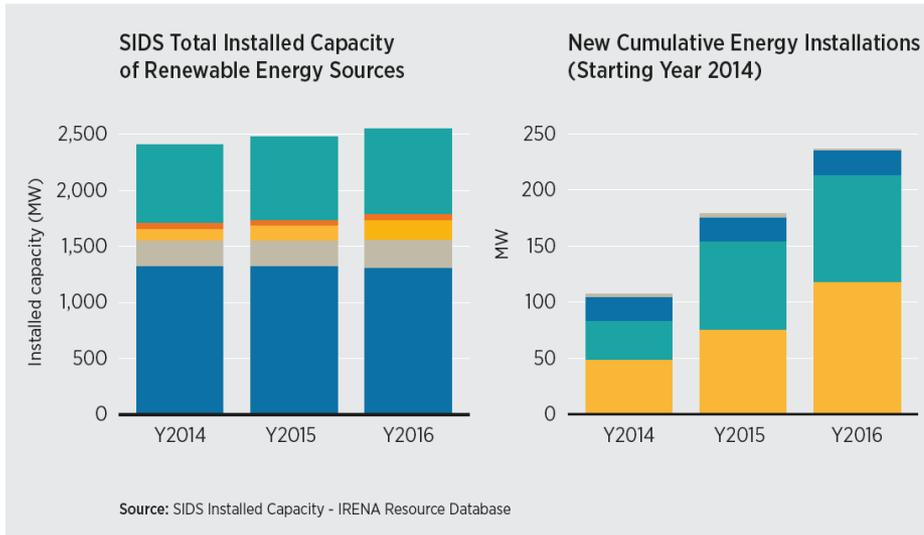
- Renewables: Lower levelized cost of electricity (LCOE) versus diesel generation
- Since the inception of the Lighthouses initiative in 2014 there has been significant deployment of renewables is SIDS

SIDS Lighthouses initiative: 2020 Targets

- Mobilize USD 500 million
- Deploy 100 MW of new solar PV power
- Deploy 20 MW of new wind power
- Deploy significant quantities of small hydropower, geothermal power and some ocean energy projects
- Ensure that all participating SIDS have renewable energy roadmaps

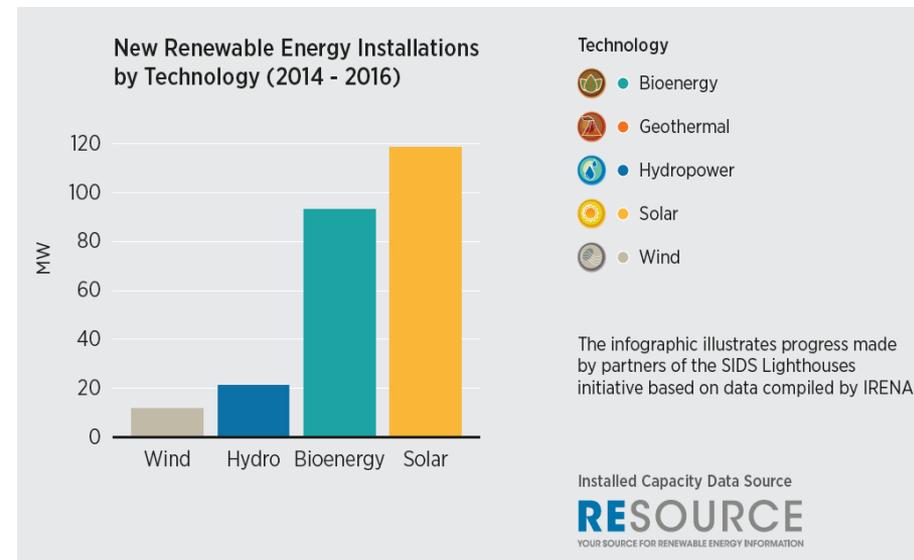


SIDS Lighthouses initiative: Renewables deployment in SIDS



Since the inception of the Lighthouses initiative in 2014 there has been significant deployment of renewables in SIDS

Solar PV has been dominating new generation capacity and already achieved the target. Significant bioenergy (bagasse) addition in large SIDS (Cuba, DR, Fiji)



SIDS Lighthouses initiative: Partners



Quickscan Progress and Analysis Results

SIDS Lighthouses Quickscan: Overview

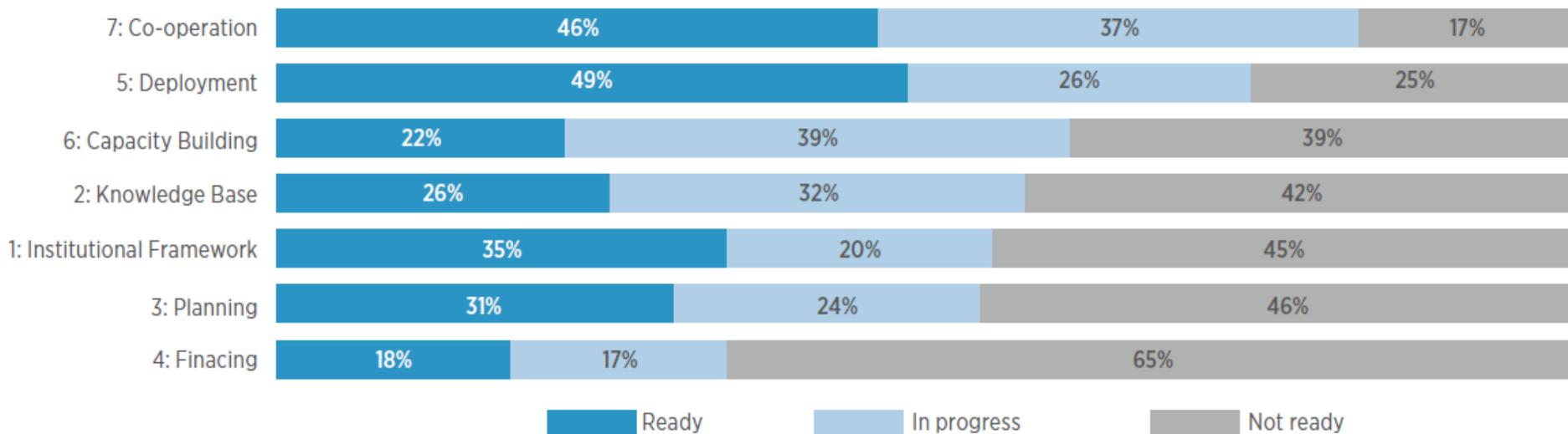
- Quickscan is a tool developed by IRENA to:
 - Assess supporting conditions for a transition to RE on islands
 - Identify areas where targeted assistance can accelerate the RE transition
 - Establish a baseline and monitor RE deployment progress
- Quickscans provide a wealth of information and insights on how SIDS and other islands can scale up their transition to renewables



SIDS Lighthouses Quicksan: Progress

- IRENA assisted 20 SIDS in completing a Quicksan in 2015:
 - *Antigua and Barbuda, Aruba, Bahamas, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Maldives, Marshall Islands, Mauritius, Nauru, Niue, Palau, Samoa, Seychelles, Solomon Islands, Tonga, Trinidad and Tobago, Tuvalu and Vanuatu*
- The Association of the Overseas Countries and Territories of the European Union (OCTA) assisted the 18 overseas countries and territories (OCTs) in completing Quicksans in 2016.
 - **8 SIDS:** *Anguilla, Bermuda, British Virgin Islands, French Polynesia, Montserrat, New Caledonia, Sint Maarten and Turks and Caicos Islands.*
 - **10 non-SIDS:** *Bonaire, Falkland Islands, French Southern and Antarctic territories (TAAF), Pitcairn Islands, Saba, Saint Barthélemy, Saint Helena, Saint Pierre et Miquelon, Sint Eustatius and Wallis et Futuna.*

OCTA Quickscan analysis: RE transition elements



- Barriers and opportunities similar to IRENA analysis: *Need for access to RE project financing and capacity building*
- Highlight challenges to renewables coming from:
 - *Scarcity of land for project deployment*
 - *Lack of co-ordination among key energy sector stakeholders, with co-operation between governments and utilities being especially critical*

Quickscan Outcomes and Next Steps

SIDS Lighthouses Quickscan: Outcomes (I)

- Quickscans have been completed for 28 SIDS and 10 additional island countries or territories
- Established baseline for measuring progress on RE transition
- Identified high impact areas for support / cooperation to accelerate renewables deployment
- OCTA Quickscan results presented in 2016 at 2nd summit of OCT Energy Ministers
- IRENA Quickscan identified need for national energy roadmap on several islands and initiated cooperation on roadmap development

SIDS Lighthouses Quickscan: 2018 Next Steps

- Conduct a 2nd round of Quickscans to cover
 - SIDS Lighthouses partners that have not completed a Quickscan
 - A 2nd Quickscans for all SIDS Lighthouses partners that participated in the 1st round of Quickscans
- Publish an updated report based on the 2nd round of Quickscans
 - Measure SIDS progress vs. 1st round
 - Highlight areas that are still blocking progress on RE deployment
 - Provide case studies on islands with high share of RE generation
 - Measure progress on SIDS Lighthouse initiative 2020 goals
- Perform outreach activities to highlight Quickscan findings with development partners
- Provide targeted workshops & trainings to SIDS based on needs shown in Quickscans

Island Energy Transitions

SIDS Lighthouses

10th January 2018

Additional Information

Outline

- SIDS Lighthouses Quickscan Overview
- Renewable Electricity in Islands
- Quickscan Methodology
- Quickscan Progress and Analysis
- Quickscan Outcomes and Next Steps



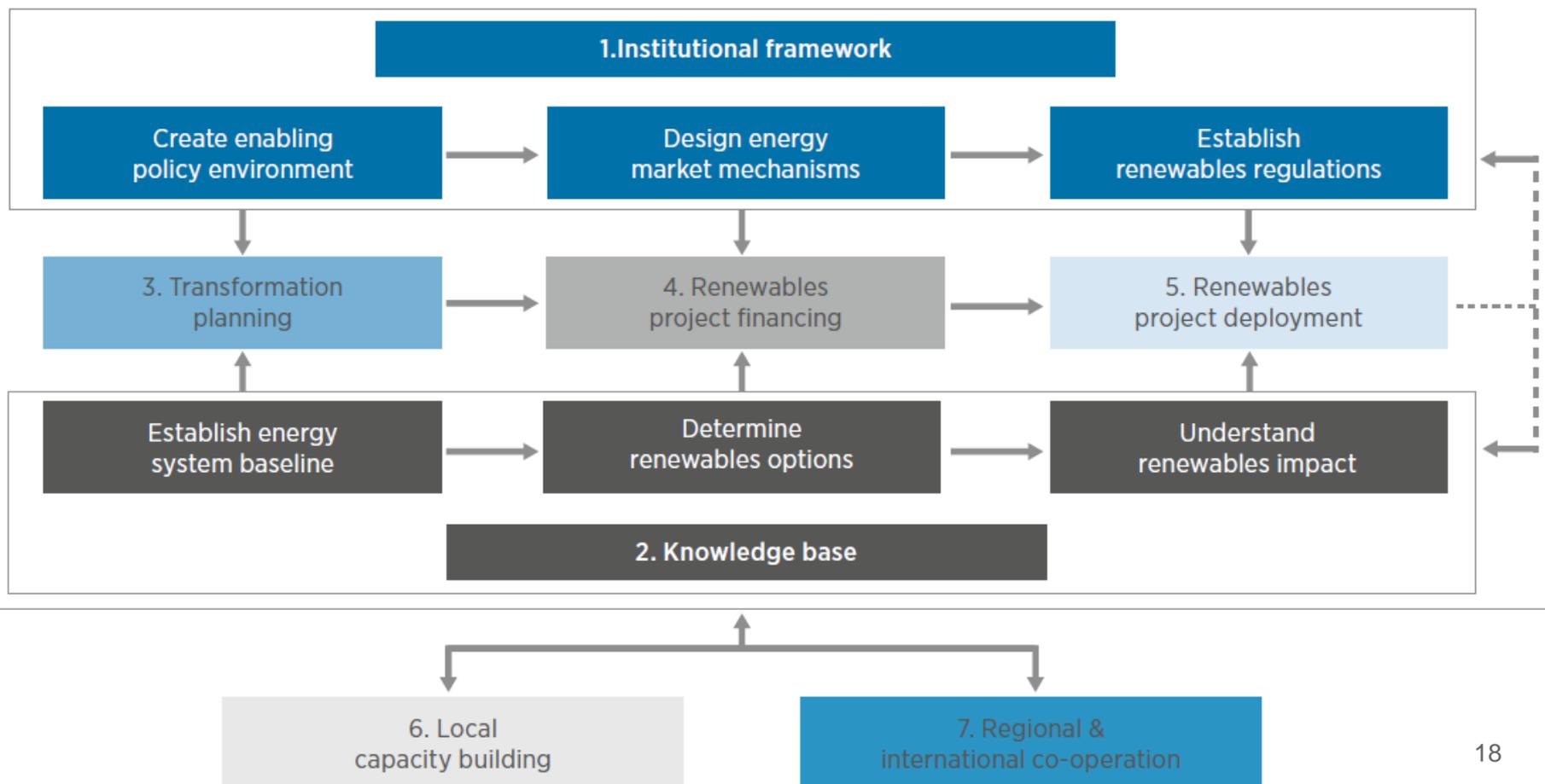
Quickscan Methodology

SIDS Lighthouses Quickscan: Methodology and Goals

- Quickscan based on questionnaire covering the full RE transition
 - *Completed by a local government-appointed energy sector expert*
 - *Documents and data are collected to validate the questionnaire answers and establish the status of the electricity sector*
- IRENA or other Lighthouses partners perform analysis to:
 - *Produce a scoresheet of questionnaire responses graded as: ready, in progress, not ready*
 - *Identify critical barriers to RE deployment*
 - *Identify high-impact opportunities to accelerate the RE transition*
- Increases government understanding of RE transition process
- Facilitates engagement with and raise awareness among stakeholders regarding potential and benefits of RE

SIDS Lighthouses Quickscan: Island RE transition process

- Quickscan is based on IRENA's extensive work in islands
- Focused on 7 key elements of a sustainable RE transition process



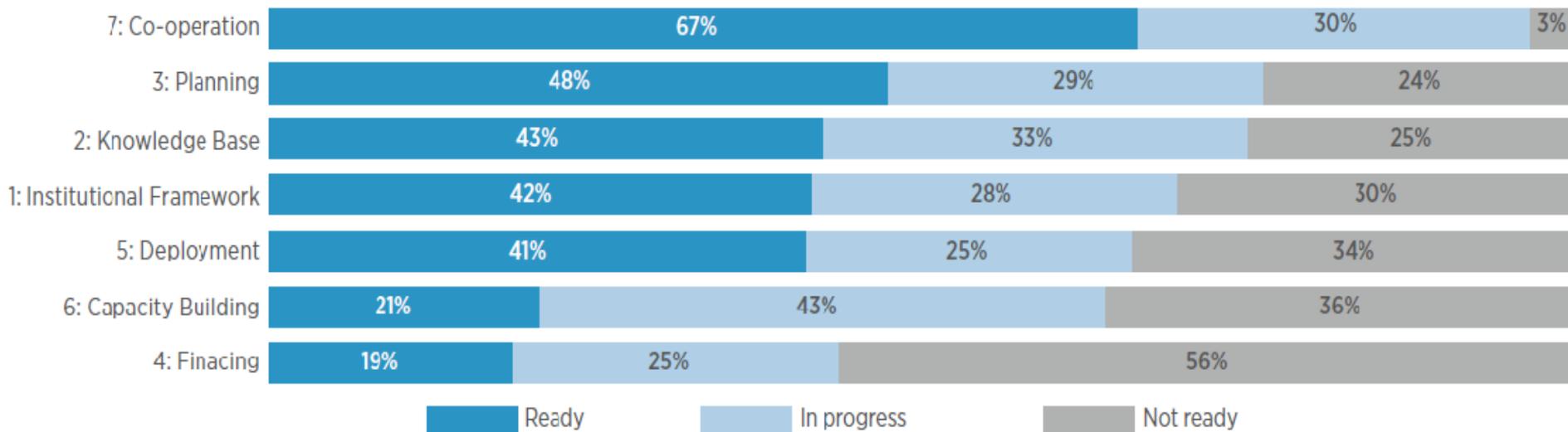
SIDS Lighthouses Quickscan: Island RE transition process

- 1. Institutional framework:** Local policy, regulation, market structure and interactions among key stakeholders set the foundation for an effective and sustainable RE transition
- 2. Knowledge base:** Extensive institutional and technical knowledge among all stakeholders are critical to enable a successful RE transition
- 3. Transition planning:** Traditional focus on planning for fossil fuel-based power systems results in limited knowledge in many SIDS of the different planning procedures required to support effective RE deployment and operation

SIDS Lighthouses Quickscan: Island RE transition process

4. **Project financing:** RE project costs driven by upfront investment:
Access to affordable financing critical to implement a RE transition
5. **Project deployment:** Deployment, operation and maintenance of RE projects requires specific processes, procedures and infrastructure that may be lacking in some SIDS
6. **Capacity building:** Development of local capacity across elements 1 to 5 is often needed for successful transition to RE
7. **International and regional cooperation:** Supports transfer of technical, financial, policy and regulatory knowledge to assist RE transition

IRENA Quickscan analysis: RE transition elements



- Access to finance a major issue: Local funding not sufficient to achieve RE goals, Framework to attract foreign RE investments not in place / not effective
- Lack of plans and budgets to operate and maintain public and donor-funded RE projects
- Critic need for capacity to plan and operate grids with a high share of wind and PV
- National energy roadmaps covering RE developed by most SIDS in the Pacific, still needed for some SIDS in the Caribbean and AIMS regions

SIDS Lighthouses Quickscan: Outcomes (II)

- Quickly applied to numerous islands: IRENA completed Quickscan data collection and analysis for 20 SIDS in only 5 months
- Easily implemented by other Lighthouses partners: OCTA independently assisted 18 OCTs with Quicksans in only 6 months
- Excellent tool for country self-assessments of local capacity and priority areas for action: boost local knowledge of RE transition process
- Identified regional trends and common barriers across numerous islands
- Can empower SIDS government to mobilize funding, push for reforms and communicate their needs