



CTF- Ouarzazate I CSP Project

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*San Giorgio Group:
Expanding Green, Low-Emissions Finance
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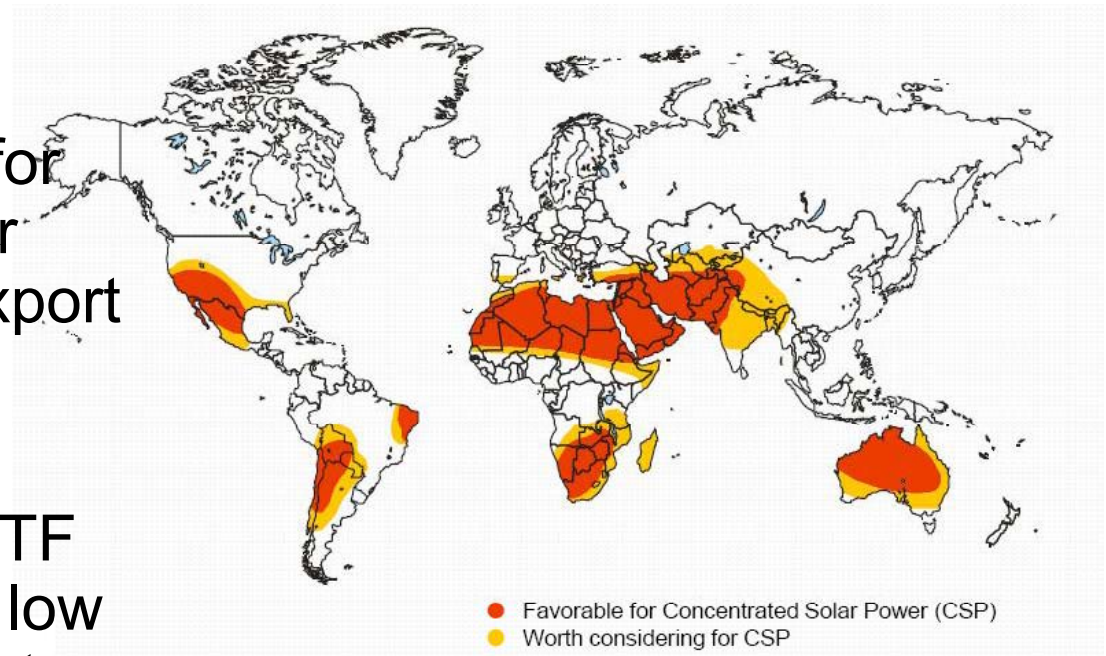
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Context

- CSP very promising: grid friendly, cost reduction potential
- MENA prime location for CSP: exceptional solar potential, European export market
- CSP still expensive: CTF and donors to provide low cost financing for CSP to take off in MENA



Mediterranean North-South Integration

NORTH

European interest in low carbon energy sources

Favourable regulatory framework

- 20% share of RE in the power consumption by 2020
- Article 9, encouraging energy cooperation with third party countries

How to achieve EU targets at lowest cost

SOUTH

Inherent strengths of Morocco

- Solar Irradiance
- Land
- Proximity with EU

Morocco, a first regional mover → Ambitious Moroccan solar plan: 2 GW by 2020

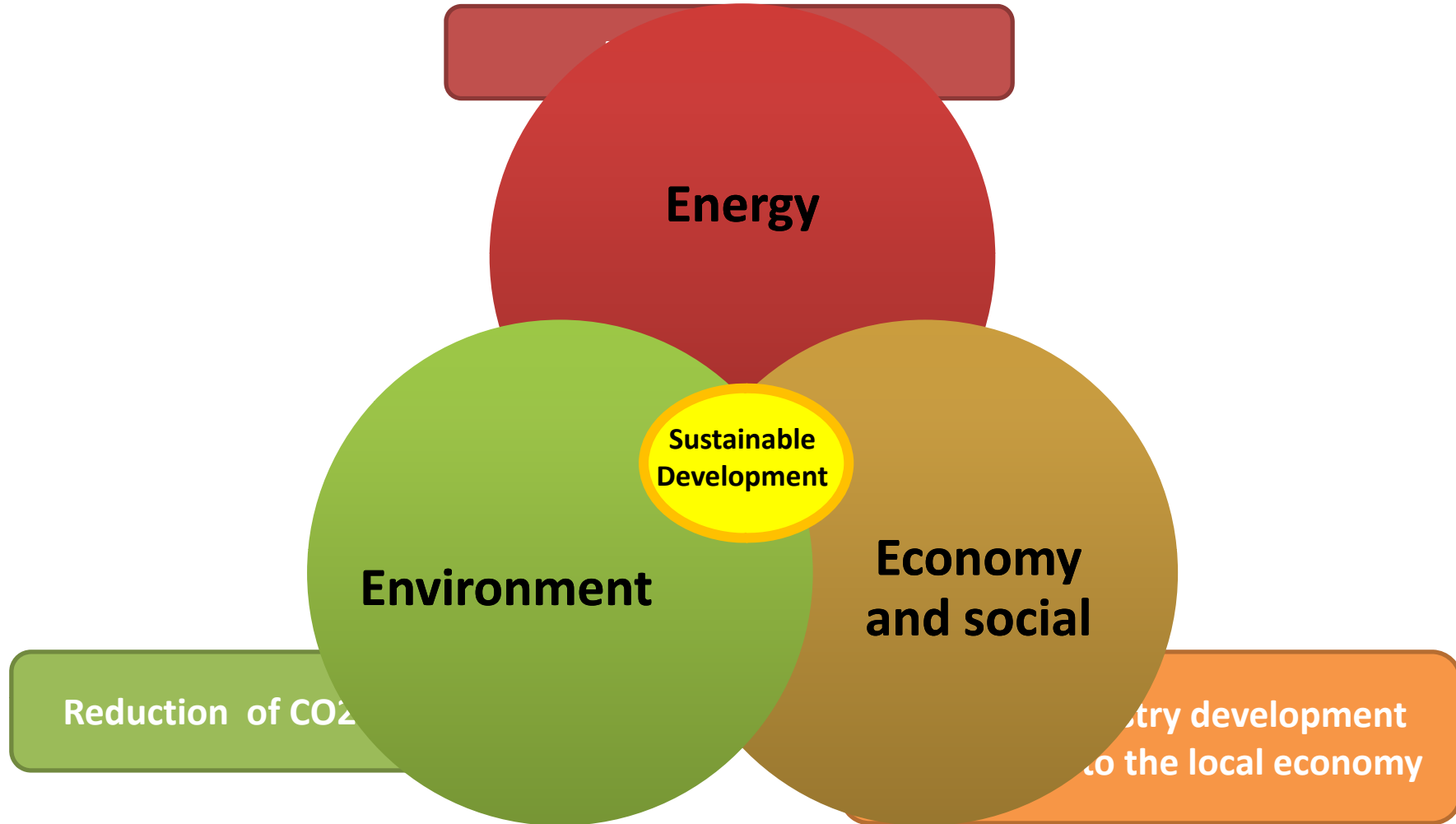
Existing Interconnections with Spain and Algeria

Energy security, low carbon growth

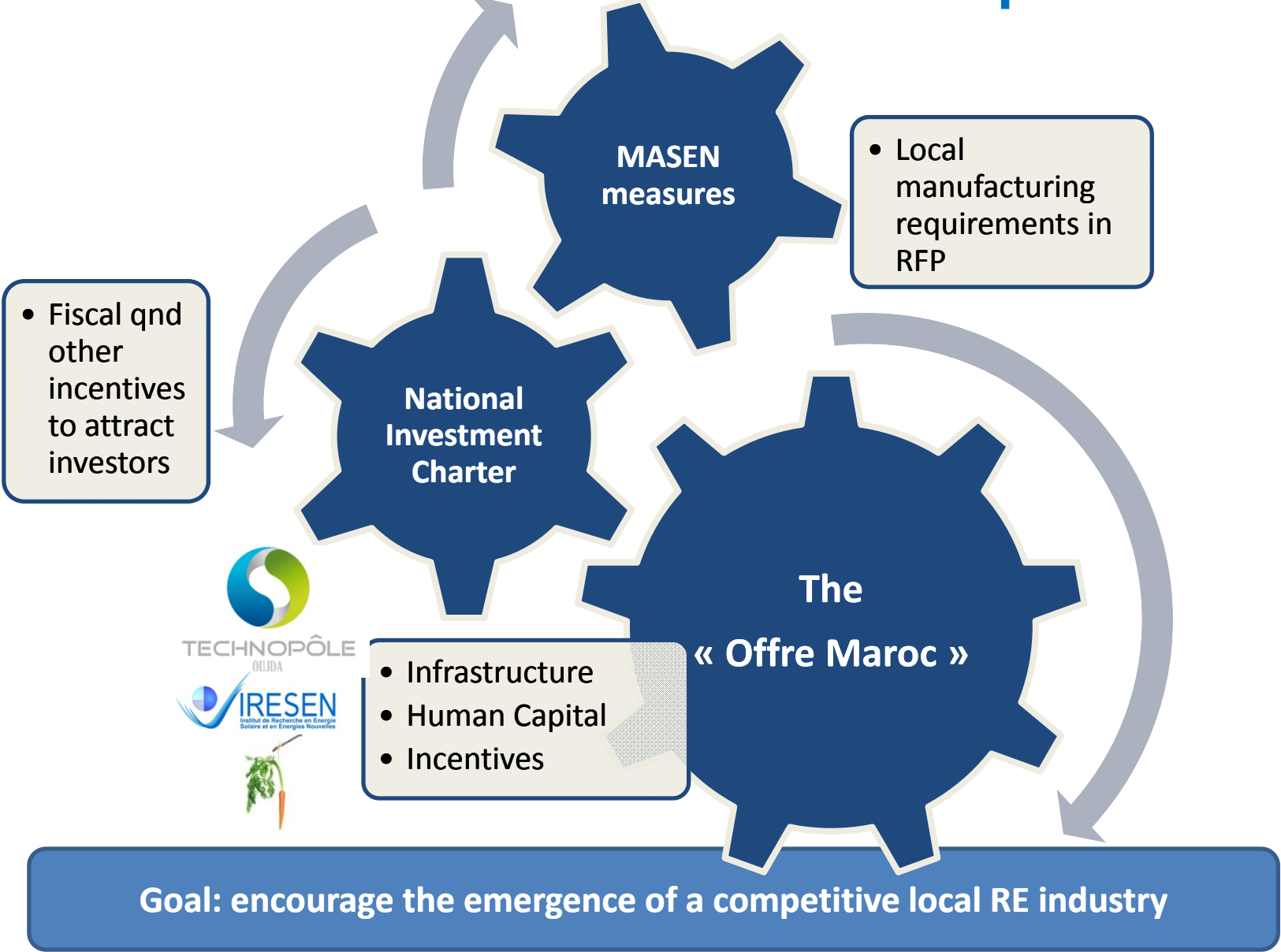
Legal, Technical, Commercial constraints

Discussions in progress to institutionalise exports

A technology at the crossroads of energy, environmental, social and economic policy



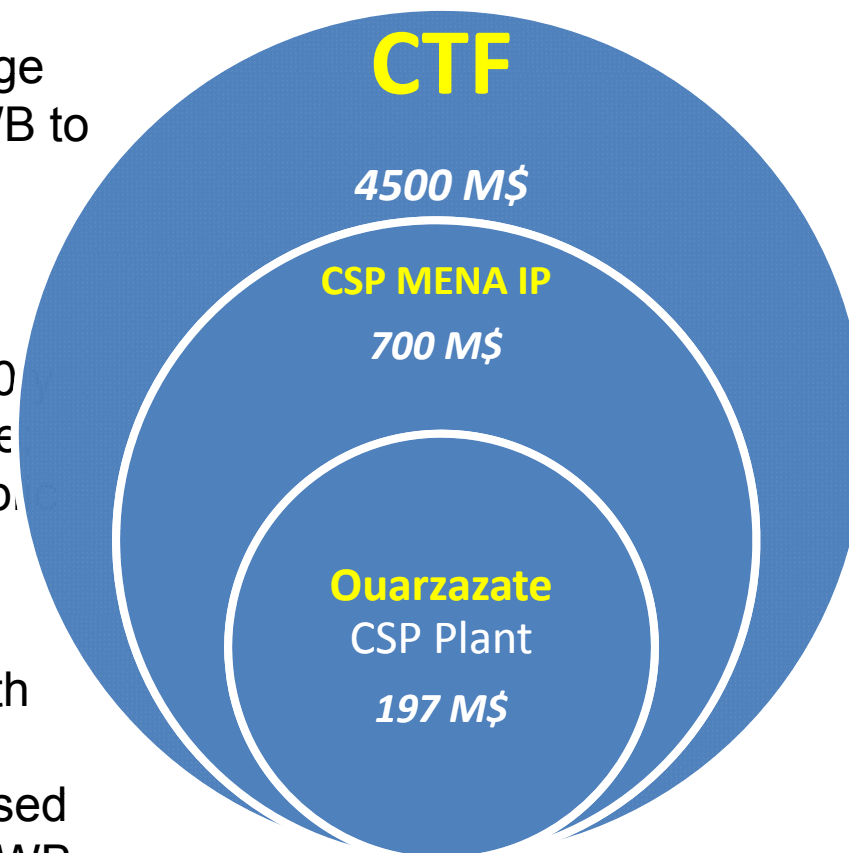
Morocco already implementing comprehensive framework for industrial development



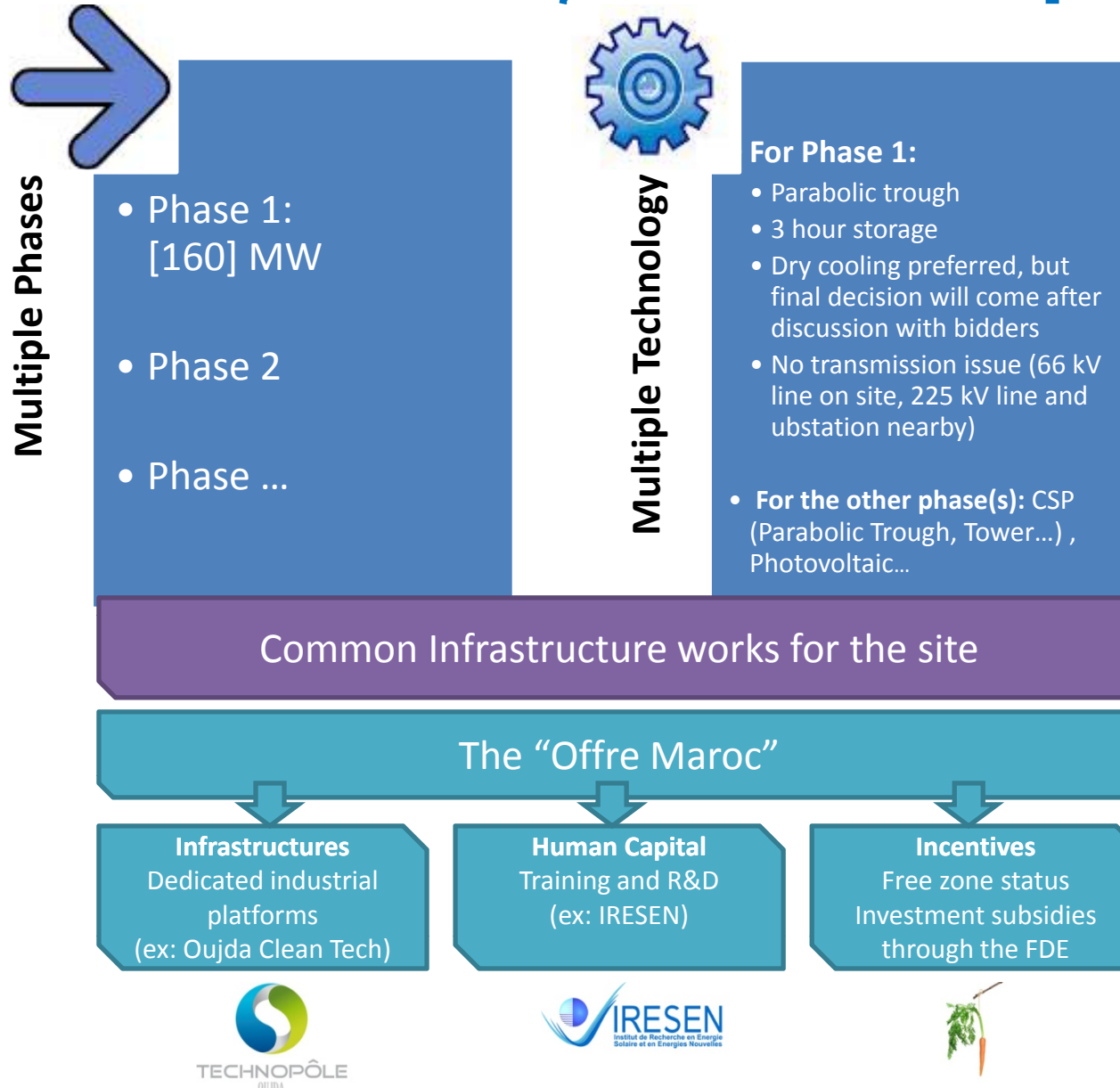
The Clean Technology Fund:

A precursor to the Green fund

- Clean Technology Fund (CTF) is a multi-billion fund (\$4.5 billion) for climate change mitigation set up in 2008, managed by WB to finance “transformational” projects in developing countries
- Very concessional public sector terms: 40 repayment, 10 y grace, 0.25% service fee
Private sector terms benchmarked to public sector terms
- CTF supports CSP scale-up in MENA with the US\$ 5.6 Billion **MENA CSP scale up Investment Plan** (MENA CSP IP) endorsed by CTF in December 2009, launched by WB and AfDB



Ouarzazate Project Description



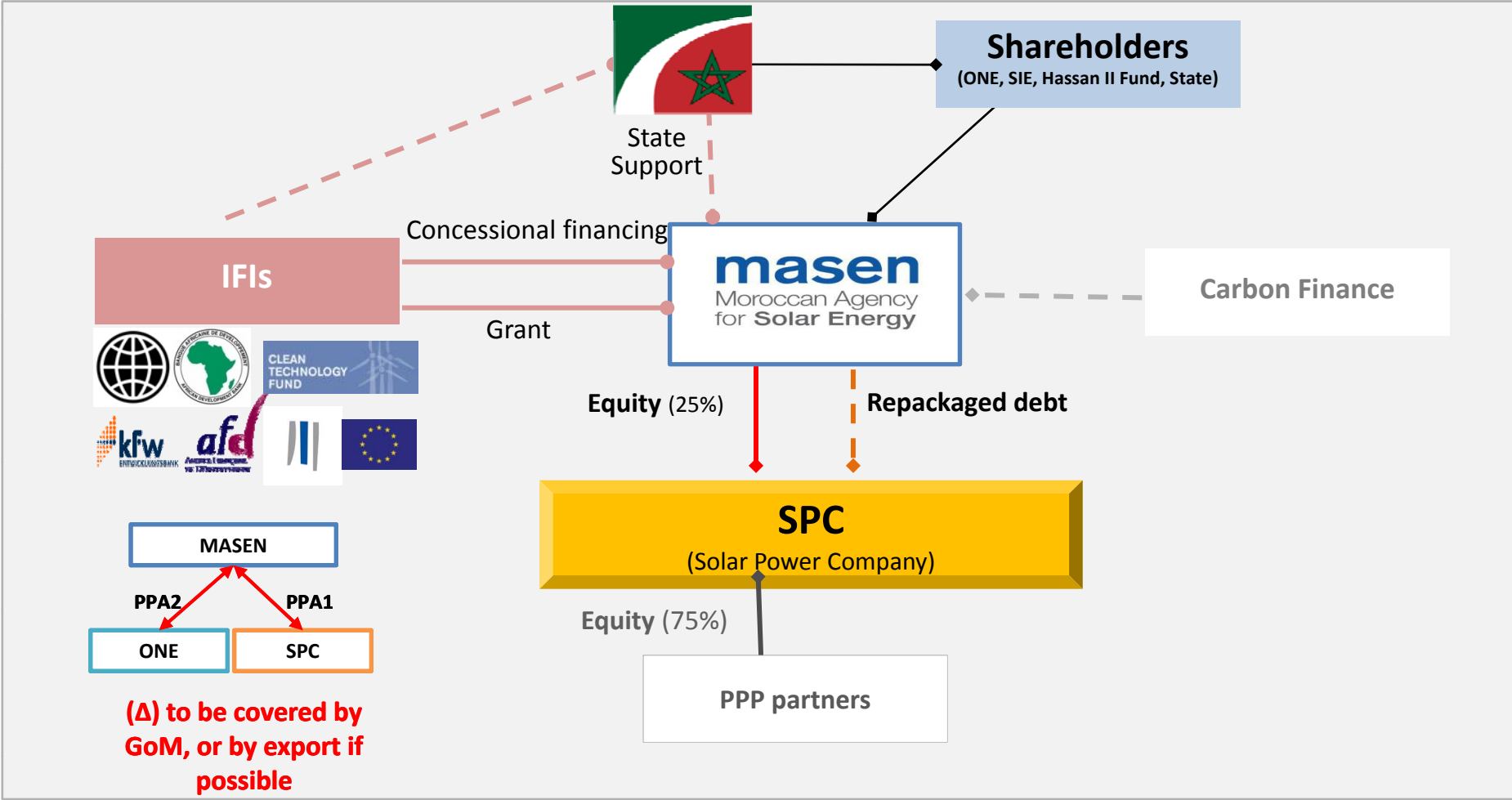
Implementation: a PPP structure

- MASEN: a dedicated structure to implement the Morocco Solar Plan
- Private sector developer for Ouarzazate I to be selected through international bidding process with prequal and 2 stage bidding:
 - EOI: 200 candidates
 - 19 submissions for prequal
 - 4 prequalified: Abeinsa Consortium, Orascom Consortium, Enel Consortium, ACWA Consortium
- Solar Power Company (SPC) to be created, 75% private sponsor/25% MASEN
- Financing
 - 70% debt/30% equity
 - 100% of debt likely to be provided by MASEN, through on-lending of funds from IFIs
 - Participating IFIs: IBRD, AfDB, EIB, AFD, KfW, NIF (EC) + CTF through IBRD and AfDB



PPP Financing structure

for lowest cost and optimal risk allocation



Concessional Funding is Essential

Need to buy down CSP costs to close to economically viable tariff levels

Concessional Funding to be maximised

Development

IFIs

Climate Change

More instruments, *like the Clean Technology Fund*, needed to rapidly meet the objectives

World Bank Group Assistance

Component 1 (US\$ 97m, CTF)

Support construction of 160 MW CSP power plant through PPP

Component 2 (US\$ 200m, IBRD)

Innovative mechanism to provide support to partially cover the difference between PPA1 and PPA2

- Intended to provide flexibility and ease burden on GoM's budget during first 4-8 years of Moroccan Solar Plan (GoM decides when to draw on State funds or IBRD loan)
- MASEN and Moroccan Solar Plan to become financially self sustainable after a few years (including repayment of early liquidity support) through development of several hundred MWs of export
- Will also provide risk mitigation to private sponsor, as secondary outcome

Upon request for additional risk mitigation, WBG to provide appropriate instruments (PRG, MIGA products...)

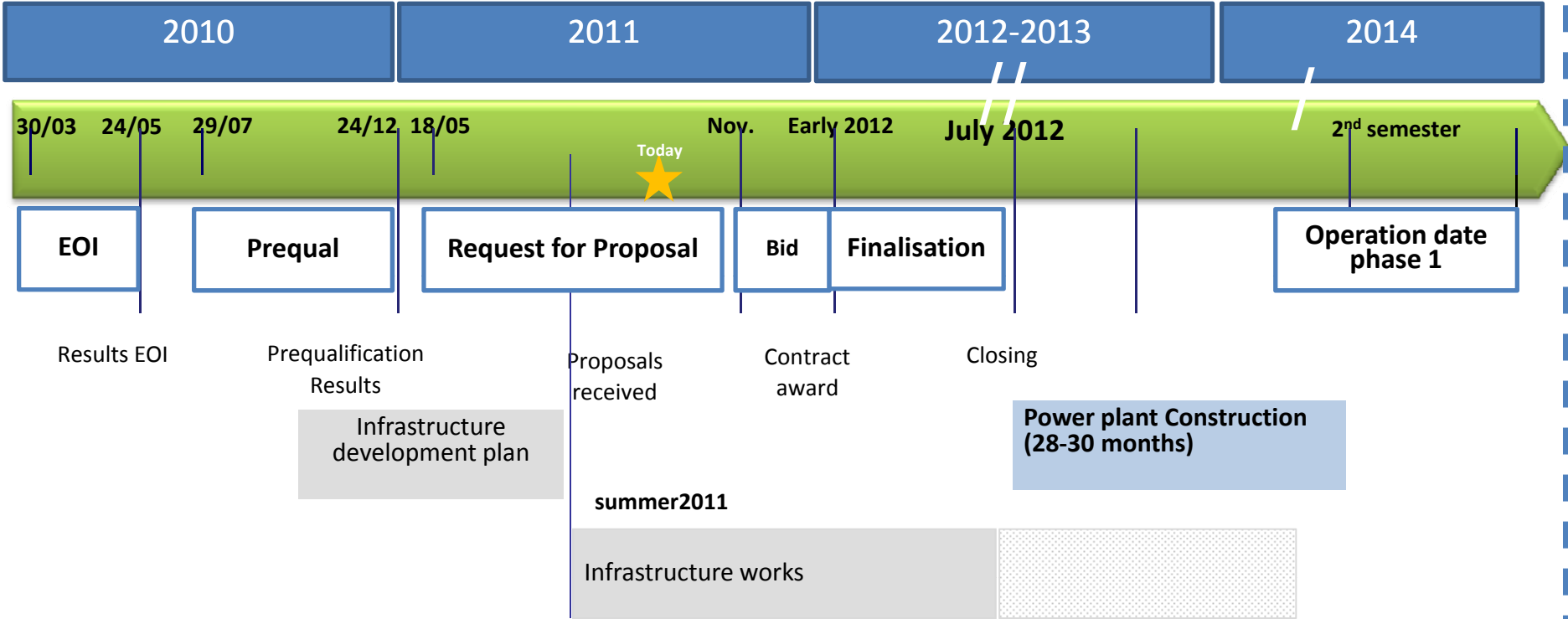
IFC may finance debt or equity for the selected PPP partner



Project Schedule



Ouarzazate Project schedule



In summary, a high risk project with high reward

- WB Project risks are assessed as high, but mitigation measures are in place
 - Selection of a financially or technically weak private partner
 - Implementation capacity of MASEN, its advisors and its partners
 - Technological risk
 - Coordination among co-financiers
 - Tight schedule proposed by MASEN
 - Committing Bank financing prior to finalizing the contractual details of the PPP structure
- Reward: a zero carbon technology for the environmental and economic benefits of Morocco and the rest of the world

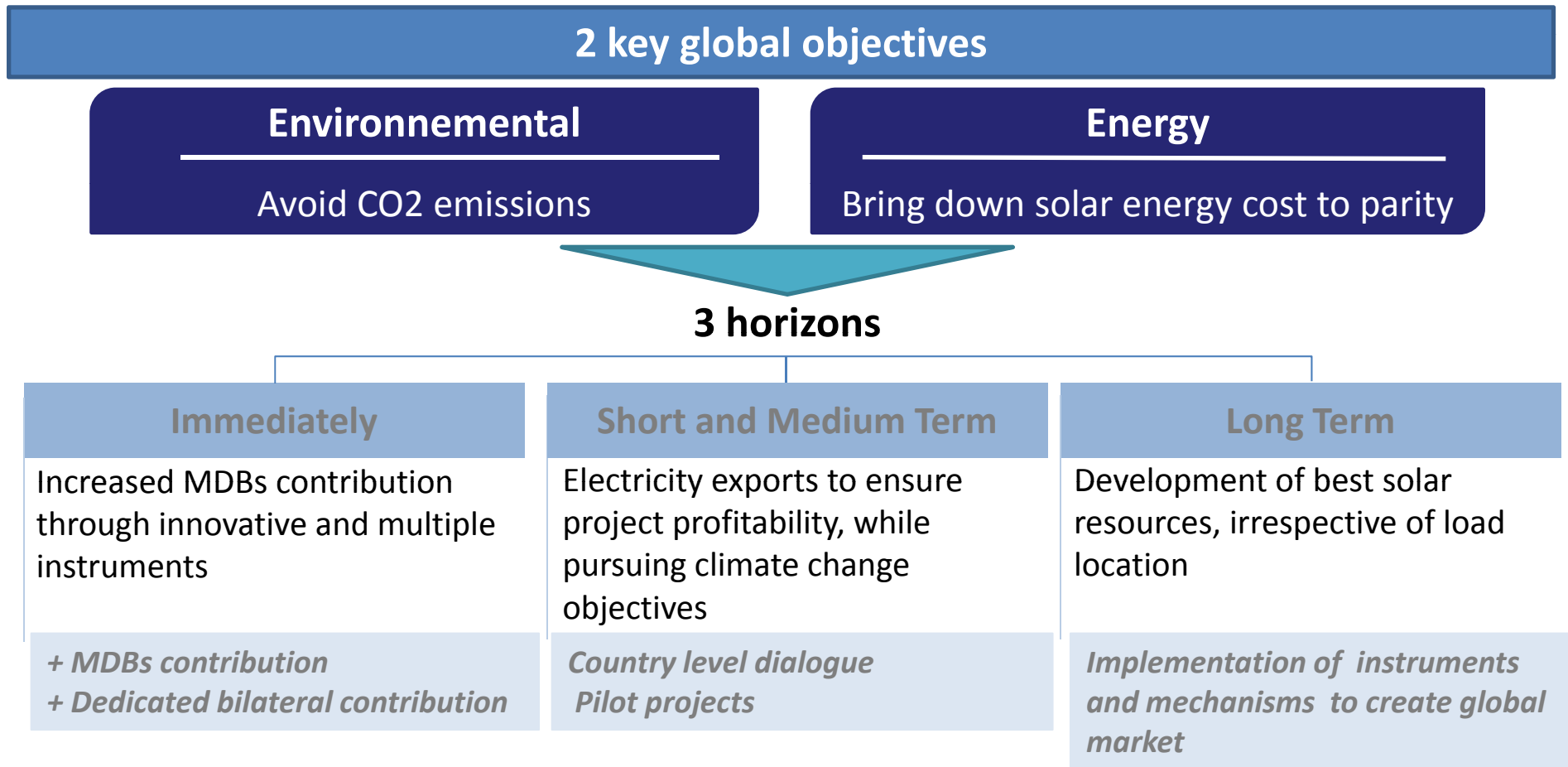


Next steps

- Standardize design and streamline process for next phases of Ouarzazate and next plants of Morocco Solar Plan so as to reduce transaction cost and reduce time from conception to commissioning
- Mobilize new sources of financing such as Green Fund
- Increase private sector participation
- Set up institutionalised framework for exports
- Make Mediterranean market a reality
- Ensure derived benefits are delivered and make local manufacturing a reality (an imperative given Arab Spring)
- Share knowledge and experience to draw lessons for other countries



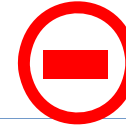
For a Sustainable Replicability



Local manufacturing in MENA: Pros and Cons



- ▶ Low labor cost
- ▶ Existing industries: metal structures, electric and electronic equipment
- ▶ Existing CSP experience
- ▶ Ambitious development plans for renewable energies (Moroccan solar plan, Tunisian solar plan...)
- ▶ Strong political will to favor local integration



MENA risk as perceived by potential investors:

- ▶ Institutional, fiscal and legal framework
- ▶ Infrastructures
- ▶ Financing instruments for innovative projects
- ▶ Availability of skilled labor
- ▶ Knowledge of CSP
- ▶ Competition from other markets
- ▶ Last but not least: visibility/credibility of CSP programs

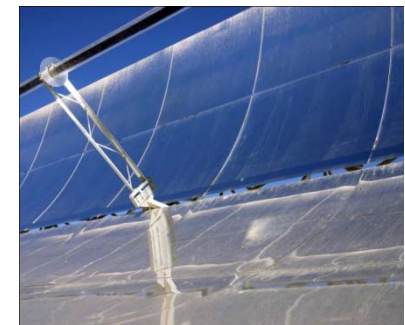


Local manufacturing: Making it happen

- Supporting local manufacturers
 - Regulatory framework
 - Coordination of national industry and energy policies
 - R&D, education
 - Financing (business creation, diversifications): capital subsidies, strategic funds, subsidized loans
 - Technology parks, industrial clusters, etc.
 - Local content clauses/incentives in project bids
 - International and regional cooperation

- Donors Assistance- Study under way
 - Identify regulatory and policy measures to improve the investment climate
 - Business plan for a Climate Innovation Center (CIC)

- Credibility and visibility:
 - Steady flow of projects, at regional level
 - Credible financing of CSP investment
 - Credible financing of offtake





Thank you!

