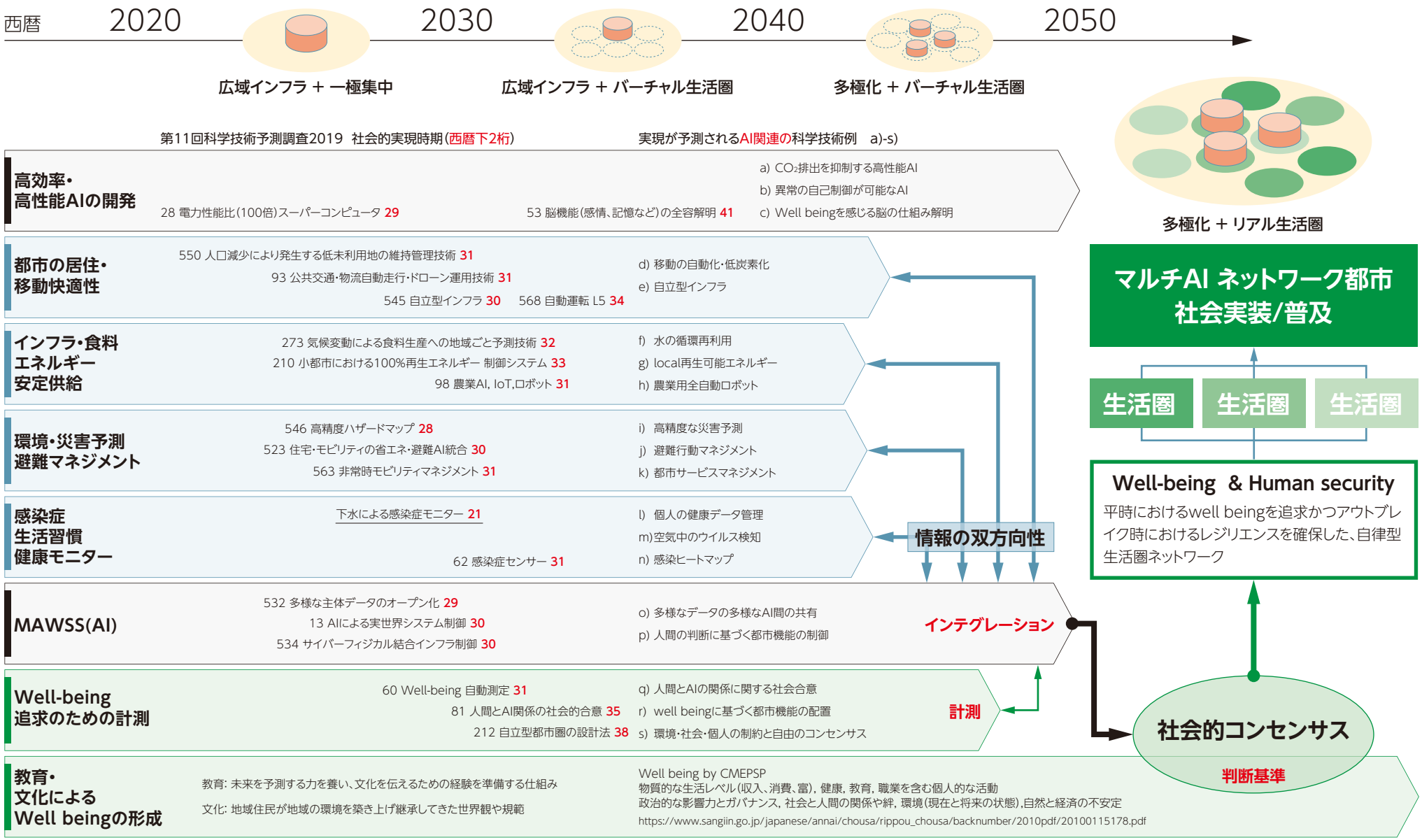
マルチAIネットワーク都市実現に向けたロードマップ

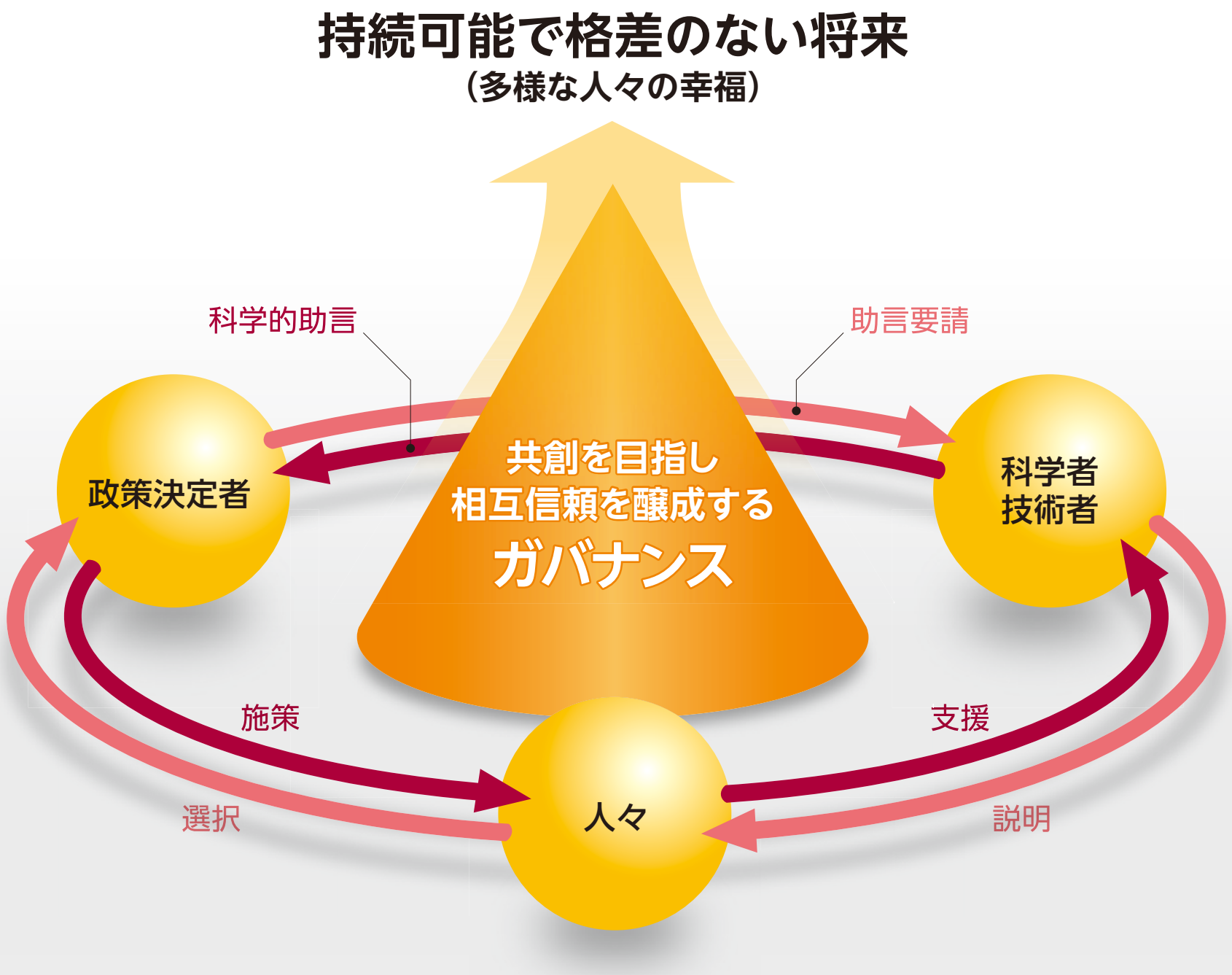


Policy Framework Roadmap for Global Carbon Neutrality and Energy Sufficiency

Year	2021-2030	2031-2040	2041-2050	2051 + beyond
Carbon Neutrality	2030 **China Emission Peak**		2040 **EU/JPN/US Net Zero Carbon**	2060 **China Net Zero Carbon**
Energy Sufficiency		2030 **SDG #7 Target Yr**	- Realize genuine energy sufficiency for all	
Policy + International Cooperation	- Establish FICNES for comprehensive policy planning	- Implement policies based on advices from FICNES - Strengthen coop for developing/emerging countries	- Strengthen coop for developing/emerging countries, especially for LLDC	
Human Resource Development	- Establish a new graduate school for young scientists and engineers worldwide	- Encourage young scientists and engineers to work for global C/N and E/S (by mobilizing funds)		- Expand network of partners to work for further penetration of new tech paradigm
Technology Evaluation System	- Establish tech expert team in FICNES - Issue "Annual Tech Readiness Report"	- Establish optimization methodology for dynamically-changing multilateral infrastructures	- Disseminate the optimization method globally	
Investment Promotion Scheme	- Establish financial expert team in FICNES - Issue "Annual Investment Appropriateness Report"	- Establish new investment promotion mechanism - Make use of the new mechanism	- Disseminate the new mechanism for scale-up of investment	

Carbon Neutrality Technology Roadmap

	Year	2021-2029	2030	2040	2050
Global Carbon Emission Reduction	**Developed**	Decrease	Further decrease	**Net Zero 2050**	**Negative emission**
	China	Peak-out 2030	Decrease	Further decrease	**Net Zero 2060**
	Developing/Emerging				
Energy Supply	**Renewable Energies + Grid + Storage**	Concurrent cycle of R&D/Scale-up & Cost-down/Deployment with incentives/Fully-commercialized deployment (Developed countries ~ Middle Income countries ~ Lower Income countries)			
	Fuel Conversion to H2/NH3				
	Nuclear	R&D	R&D + Demonstration	Deployment (p)	Further Deployment (p)
Energy Demand	**Alternatives for Carbon-intensive Process**	R&D	Scale-up & Cost-reduction + Deployment by early adopter	Continued Scale-up/Cost-redc + Deployment by followers	Continued dissemination
	Mobility	R&D + Deployment	Continued R&D + Enhanced deployment	Continued replacement of old technologies	Continued dissemination
	Energy Conservation				
	City & Social Infrastructures	R&D + Design + Demonstration		Reconstruction of city	Continued reconstruction
Energy Distribution and Trade	**Electricity Distribution**	Concurrent cycle of R&D/Scale-up & Cost-down/Deployment with incentives/Fully-commercialized deployment			
	Fuel Distribution				
	Networking Distribution Infrastructures	R&D+Design＋Demonstration	Regional Deployment	Trans-national Deployment	Trans-continental Deployment
Carbon Fixation	**CCS & CCUS**	R&D + Location Survey	Scale-up & Cost-reduction + Deployment	Large scale deployment	Continued deployment
	Forestation and Coral/ algae Absorption				


持続可能で格差のない将来
（多様な人々の幸福）
科学的助言
助言要請
共創を目指し
相互信頼を醸成する
ガバナンス
政策決定者
科学者
技術者
施策
支援
選択
説明
人々

STIガバナンス実現のロードマップ

多様な価値観の許容の展開

- 社会への働きかけ、国際活動への参画
  （公開シンポジウムや討論の開催）

ガバナンスを実現する文化の涵養

- 生活者との交流（科学の意義の発信、多様な意見の発掘）
- 科学者との交流（社会・政策リテラシーの向上）
- 政策決定者との交流・議論
  （科学への関心とリテラシーの向上）

2020年

2030年

2050年

社会課題、
目指す将来像の共有

コミュニケーションの
深化

国家レベルでの
体制構築・進化

国家レベルでの
効果測定・AI実証

- プロジェクト評価

ガバナンスのシステム化

- ガイドライン試案の策定、国への働きかけ
- ガバナンス対象となる集団規模とガバナンス効果の検証
- 科学的助言に関する能力向上
- 検証用の資料・データの体系的な収集や、オープンデータの活用推進に向けた提言

ガバナンス効果の評価

- 効果評価プロトタイプ

生活者、政策決定者、
科学者らが
共創する社会