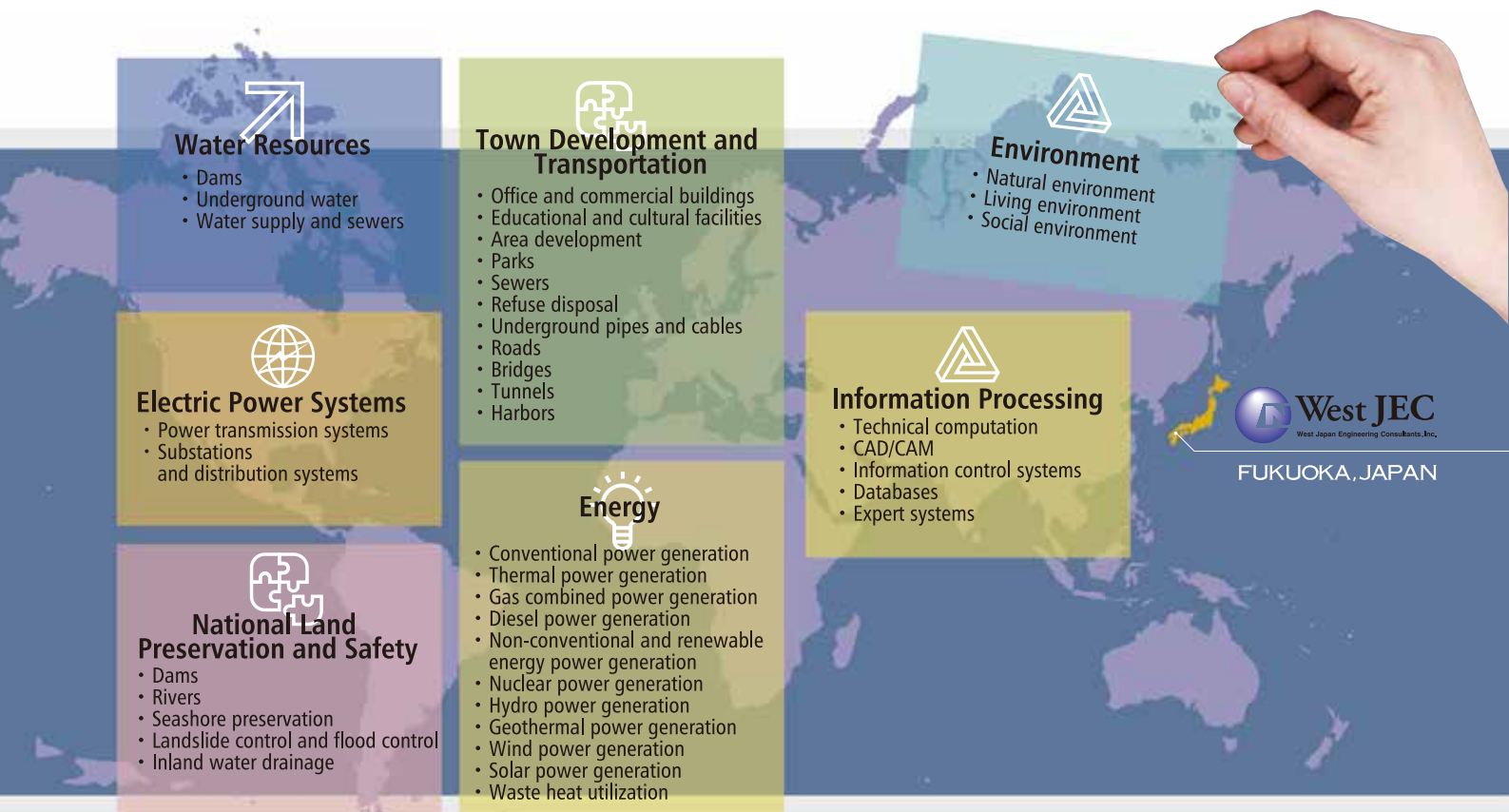


Integrated Services From Upstream to Downstream

West JEC contributes to the development and accumulation of social capital both in Japan and overseas by offering integrated services in civil, architectural, electrical, mechanical, geoscientific, and environmental engineering. Depending on the maturity of particular projects, West JEC can provide services from the stage of conceptualization and general planning through defining their economy and assessing their impact upon the society. When needed, West JEC can assist clients in determining and procuring financial resources needed to execute projects. Services can be rendered at any stage of the development process: detailed planning, detailed design, assistance in the preparation of bidding documents for materials procurement and equipment supply, assistance in contracting suppliers and contractors, construction supervision, witnessing testing and the training of personnel for the operation and maintenance of facilities. The areas in which West JEC renders these services are described below.



SEQUENCE OF SERVICES PROVIDED FOR POWER GENERATION PROJECTS

Consulting services for the construction of new facilities or the expansion, renovation and / or the rehabilitation of existing facilities usually are provided in the sequence below:

Services before construction

- Project finding
- Development master plans
- Preliminary study for selection of plant sites and access routes
- Survey and investigation for basic planning, pre-feasibility studies
- Feasibility study (technical, economic and environmental)
- Preparation of the plan for financial procurement
- Assistance in the execution and due diligence for financial procurement
- Detailed design and costing plans
- Preparation of bidding documents
- Assistance in the bidding process and contracting

During Construction

- Check and review of manufacturer's drawings
- Layout of mechanical and electrical facilities
- Detailed design of civil and architectural facilities
- Witnessing of factory tests
- Construction supervision
- Preparation of test programs
- Witnessing and assistance in overall trial operation and acceptance tests

After Commissioning

- Preparation of completion report
- Preparation of operation and maintenance manuals
- Training in project planning, design, operation and maintenance
- O&M construction and supervision

**Integrated Services
from Upstream to Downstream**