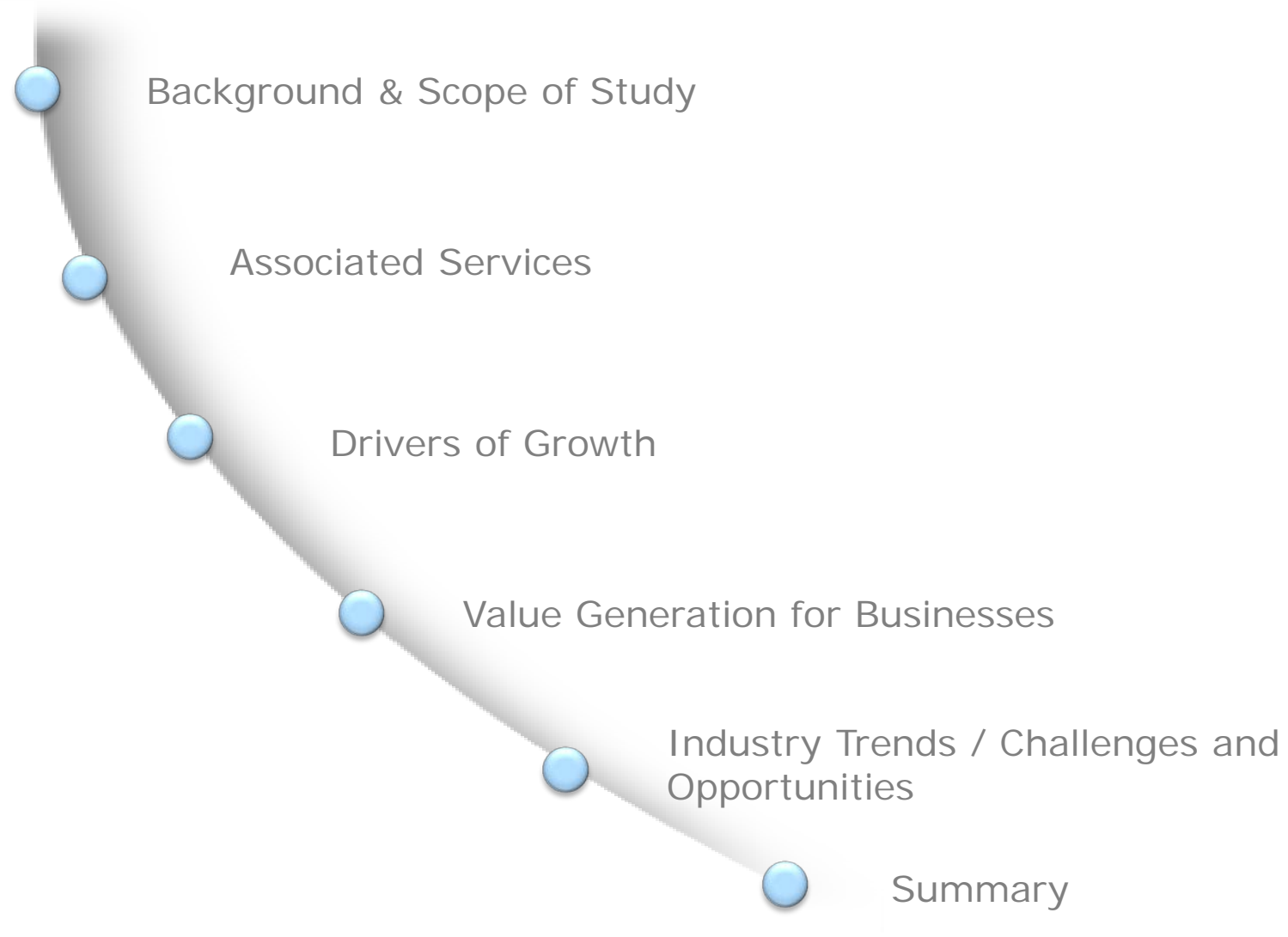




ENVIRONMENTAL DAMAGE REMEDIATION SERVICES APEC SECTOR STUDY

APEC WORKSHOP ON ENVIRONMENTAL SERVICES
HANOI, VIET NAM
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PRESENTATION OVERVIEW



BACKGROUND

REMEDIATION SERVICES

- Treatment, removal and disposal of contaminated material, typically soil, water and groundwater.
- Building decommissioning and demolition works.
- Decontamination of workplaces, buildings, vessels or other internal occupied spaces.

STUDY SCOPE

Sector Study (Presentation Focus)

- Sector characteristics and trends
- Drivers for growth
- Types of services and major players
- Opportunities and challenges

Business Models Study

- Specific services - delivery, revenue size of the business, expected growth rates
- Challenges faced by businesses with respect to government regulations (domestic economy and different jurisdictions)

DEVELOPMENT - POLLUTION NEXUS

- Population growth – increased waste generation
- Industrialization – chemical and other toxic materials
- Environmental incidents and man-made disasters – releases to the environment and impacts to health

Typically, the need for remediation works is less immediate in *developing economies* where higher priority needs such as economic advancement and other public basic needs are more likely to take precedence

DRIVERS OF GROWTH IN REMEDIATION SERVICES

Regulation Driven

- Government regulation, enforcement and spending

Market Driven

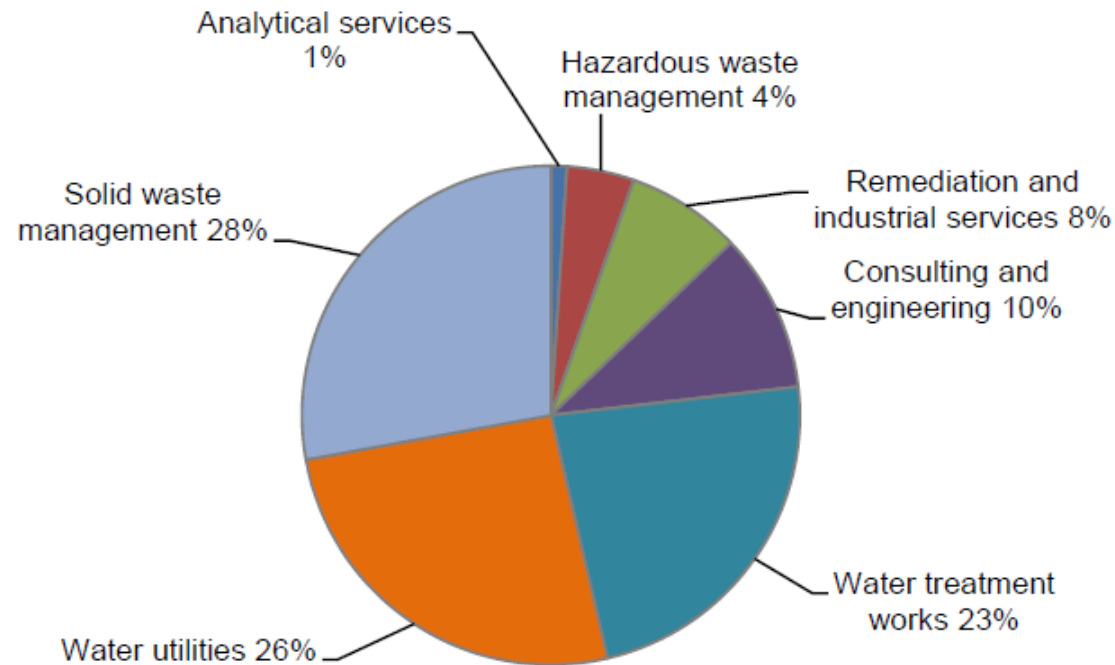
- Corporate objectives/ reputational risk
- Mitigation of business risk – contaminated land liability
- Public interest / public well-being
- Occurrence of natural or man-made disasters



VALUE GENERATION

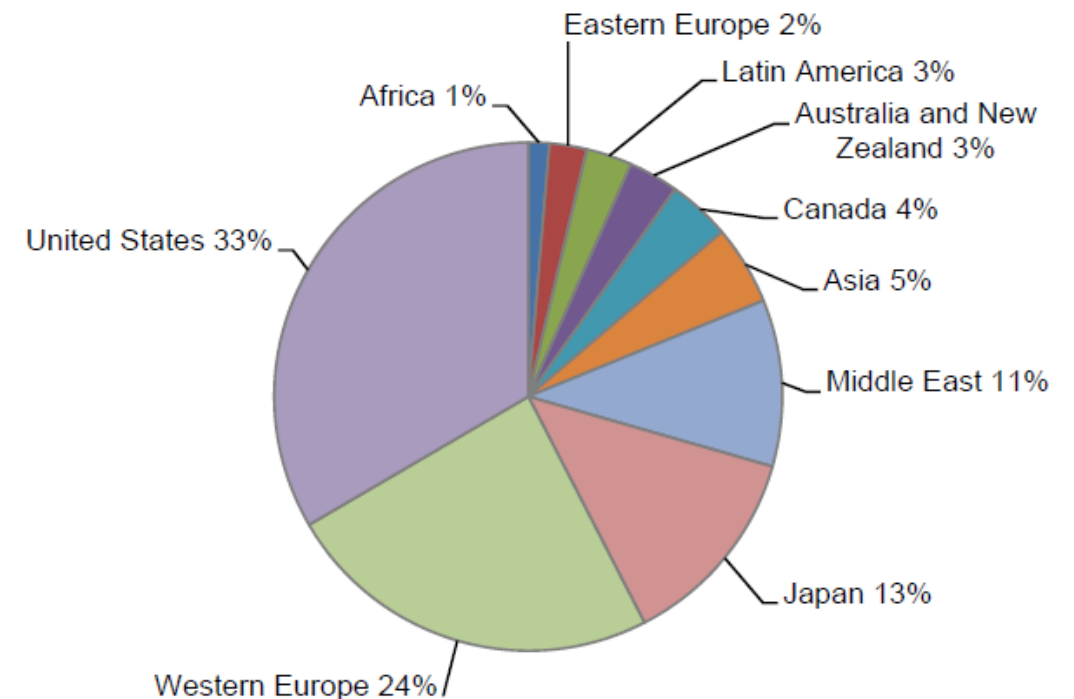
Remediation & Industrial Services

- 8% of Global Environmental Service Market (i.e. about \$37.7 billion) in 2010
- US and Western Europe had largest share of global revenues



Total = \$505.5 billion

Global Environmental Services Revenue

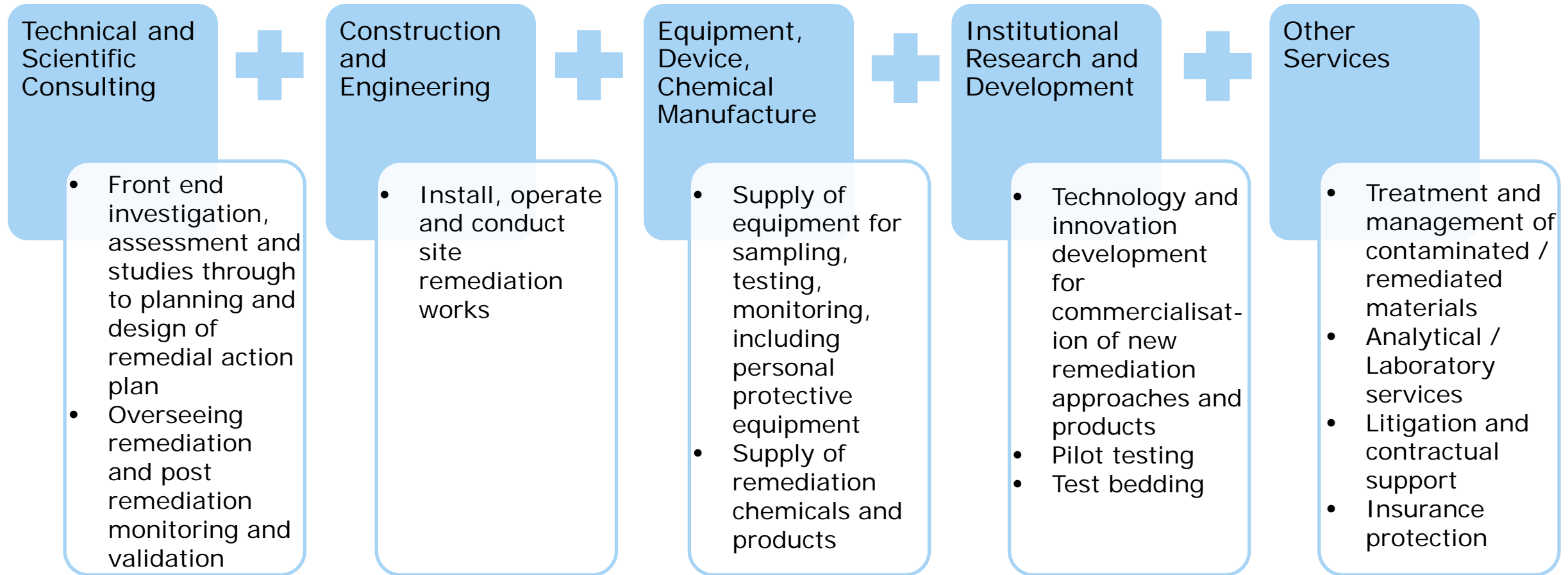


Total = \$37.7 billion

Remediation & Industrial Services

Source: Environmental Business International, "The Global Environmental Market: Regions & Segments Matrix in 2010." *Environmental Business Journal* 25, no. 6–7 (June/July 2012): 26.

VALUE GENERATION – REMEDIATION SERVICES DELIVERY



Services associated with Remediation Services Delivery corresponding to the Key Steps of Remediation Work
(Source: Ramboll Environ)

BENEFITS OF REMEDIATION

- Improve land values and usability
- Improve living environment
- Socio-economic benefits



TRENDS

- Industrial and population growth will boost need for intervention (preventive and corrective remediation)
- More regulatory focus on land contamination issues
- Increasing public awareness of environmental matters
- Industrialised vs industrialising countries
 - Legacy vs increasing land contamination issues
 - Adequacy of environmental management and/or waste management practices
 - Availability of technical expertise
 - Land scarcity and land values



CHALLENGES AND OPPORTUNITIES

Challenges

- Nature of the remediation sector is inherently complex- high cost of entry, financial and operational risks, specialized expertise and technologies required
- Lack of / inconsistent enforcement of regulations (where they exist)
- Onerous licensing and certification requirements
- Need for establishment of commercial presence and ownership

Opportunities

- Industrial development will drive demand for remediation services
- General increase in focus on environmental protection



SUMMARY

- Market potential to develop a domestic remediation sector and/or increase trade in such services
- Industrial development creating demand for remediation services

Key Drivers

- Regulations and enforcement
- Government spending



THANK YOU

CONTACT DETAILS

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