

**Notes on**

**INNOVATION AND TECHNOLOGY POLICY (ITP)  
MAKING IN TURBULENT ENVIRONMENTS**

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# ***Agenda***

- **Motivation**
- **Traditional support**
- **Some Weaknesses**
- **Working Assumptions**
- **The Technology Policy Cycle**
- **Sparking the ITP Cycle**

# ***Motivation***

**Traditional support mechanisms  
frequently seem to be insufficient  
to address present-day challenges  
& market/system failures**

# ***Traditional support***

- **Science, technology & education (STE) infrastructure**
- **Macroeconomic, political & institutional support**
  - **IP, standardization & anti-trust policies**
  - **Regulation of communications & capital markets**
  - **Corporate governance**
  - **International strategic collaboration**
- **Firm level R&D/Innovation support**

# ***Some Weaknesses***

- **Underlying policy/program priorities require updating**
- **Greater links & coordination among policies are required (*at a moment of time & through time*)**
- **Focus on identification of areas (*sectors, product classes, technologies*) where the country may possess a sustainable competitive advantages (SCA)**
- **Governance of science, technology & innovation policy**

# ***Working Assumptions***

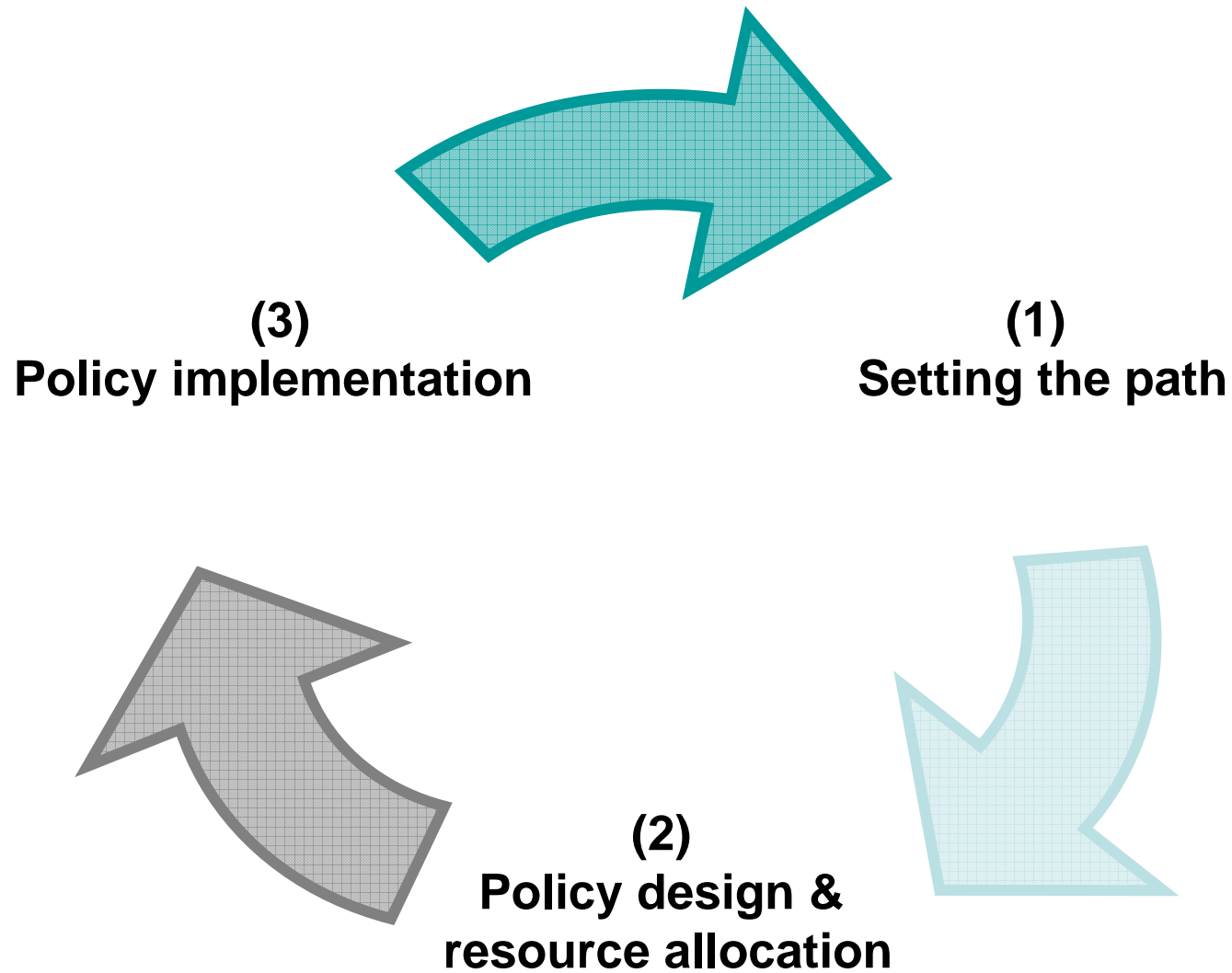
- **Increasing turbulent environment & strong competition**
- **SCA requires rapid building of capabilities**  
*(& possibly market share)*
- **Strategic collaboration requirement**  
*(both domestically & internationally)*
- **Attaining critical mass is crucial**

# ***THUS...***

**Government policy should emphasize:**

- **A clear & well defined Strategic Orientation**
- **Multiplicity of system levels (*firm, industry, nation*) & the corresponding need of their link/balance**
- **Targeting of specific technologies/sectors**

# ***The Technology Policy Cycle***





# ***Setting the Path (1)***

## **From national agenda to strategic *vision & prioritization***

- **Determine the process & parties involved**
- **Generation of long term vision of the national system of innovation & technology**
- **Translating vision to '*appropriate strategic priorities*'**

# ***Setting the Path (2)***

## **Characterizing ‘*Appropriate Strategic Priorities*’:**

- **Feasibility**
  - Based on existing capabilities
  - Reflects ‘political feasibility’
- **Robustness & flexibility**
  - Built to last under changing internal & external environmental settings
- **Sustainability**
  - Strive to sustainable competitive advantage

# ***Setting the Path (3)***

## **Determining strategic priorities:**

- **Analyzing the internal & the external environment**
  - **Opportunities/threats**
  - **Capabilities assessment**
- **Defining alternative Scenarios**
  - **Determining the scope of activities**
- **Formulating strategic priorities**

# ***Strategic Priorities in Israel***

**1969:**

**Diffusion of R&D/Innovation within the Business Sector & promoting the creation, growth & development of high tech Start Up companies**

**1990:**

**Transforming the High Tech Sector into a 'Silicon Valley' type cluster & creating a capable & networked, domestic, independent Venture Capital Industry**

**2005:**

**Determining new national priorities in the Science, Technology & Innovation. Among these, enhanced & new links with emerging countries in Asia would seem to be a new priority**

# ***Policy Design & Resource Allocation***

- **Policy/program evaluation**
- **Policy comparisons & benchmarking**
- **Identify market/system failure**
- **Identify new required policies & their designs**
- **Defining manageable indicators**
- **Resource allocation & milestones definition**

# ***Policy Implementation***

- **Managing the process**
- **Dynamic Feedback**
  - **Policy/environmental alignment**
  - **Policy redefinition**
  - **Policy-Business Sector Co-evolution**

# ***Sparking the ITP Cycle***

- **A budget & specialized human resources**
- **A capacity to undertake multidisciplinary work**
- ***A major issue is ITP governance; & the institutional location or positioning of the agency/institution coordinating the strategic level of ITP***