Cluster Development: The How
Five phases, Twelve steps

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Hong Kong
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Ifor Ffowcs-Williams
Cluster Navigators Ltd
New Zealand
Cluster Navigators Ltd: Activities

Advisors to:

- World Bank
- OECD
- UNIDO

Countries:
- China
- Bangladesh
- Cambodia
- Thailand
- Australia
- New Zealand
- Canada
- USA
- Iceland
- Norway
- Sweden
- Finland
- UK
- Czech
- Georgia
- UAE
- Kenya
- Uganda
- Mauritius
- Tanzania
- South Africa
- Trinidad
- Trinidad and Tobago
- Kenya
Common issues in cluster development

- Identifying a cluster
- Cluster analysis process
- Short listing strategic priorities
- Establishing early momentum
- Gaining private sector support
Cluster Development: Five Phases, Twelve Steps

A. Mustering Support
1. Introducing relevance
2. Identifying, prioritising clusters

B. Building the Base
3. Initial analysis
4. Leadership Group formation

C. Creating Momentum
5. Preferred future
6. Stepping stones
7. Immediate action agenda

D. Extending the Base
8. Launching the cluster
9. Formalising the cluster

E. Sustaining Momentum
10. Upgrading the strategic agenda
11. Process review
12. Linking the cluster

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Step 1: Introducing Relevance

- Introducing the relevance of clusters to potential funders, usually a public sector agency
- Positioning clustering as a center stage strategy for economic development
- Obtaining initial resources to prioritise the local clusters, and then proactively engage in their development ...
  much more than an academic exercise
When introducing a clustering intervention

- Cluster development is long term
  - Don’t over promise
- The Cluster Facilitator is a key
  - Requires long term funding
Linn County, Oregon, USA

- Supplier of grass seed to Tianamen Square
- The leading grass seed cluster globally
- Accounts for 70% of world trade in grass seeds
Udine chair cluster, Italy
Specialised cluster, specialised firms

- 14,000 employees
- 1,200 firms; 250 export
- Strong rivalry, yet collaboration: **Co-opetition**
- No. 1 in the world in chair production
A tale of two socks

- Castel Goffredo, IT
- Population 7,000
- 200 sock firms
- Annual production
  - 1.3 billion pairs
  - 60% of Europe’s socks
- Machinery exports
A tale of two socks

- **Castel Goffredo, IT**
  - Population 7,000
  - 200 sock firms
  - Annual production
    - 1.3 billion pairs
    - 60% of Europe’s socks
  - Machinery exports

- **Datang, China**
  - Population 100,000
  - 2,500 sock firms
  - Annual production
    - 9 billion pairs
    - 1/3 of world supply
Thika, Kenya
A fragile leather cluster
Small community cluster development

Isafjord, Iceland  Pop 3,000
Seafood, marine engineering & tourism clusters
Italy: Examples, World Class Clusters

- **Udine** - furniture
- **Biella** - wool textiles
- **Milan** - finance, machine tools
- **Turin** - autos
- **Parma** - food industries
- **Carrara** - stonework
- **Prato** - wool textiles
- **Montebelluna** - ski boots
- **Carpi** - knitwear
- **Sassuolo** - ceramic tiles
- **Modena** - sports cars
- **Bologna** - food machinery & packaging machinery
- **Castel Goffredo** - hosiery
Process Support

- Sports & events
- Crystal Valley, LCD
- Paper Province

- Innovative food
- Microwave Road
- Open Arena Lindholmen
- Promedes
- Sustainable plastics
- Bio medicine
- Indoor Air Quality
- Regional Governance

- Health Technology Alliance
- Food manufacturing

- Regional Governance
- IUC Olofström

- Georange, mining
- iWood
- Intelligent Vehicle Off-Road
- IGIS, Geographic Information Systems
- Regional Governance

- Bio Fuel Region
- Future Position X/GIS
- Ljusdal CRM/IKT

- Sthlm Bio Region
- Kista Science City
- Regional Governance
- Mältiden

- eLogistics

- Biotech Valley
- Regional Governance

- Manufacturing industry

- PUCK, plastic boats
- Sustainable Sweden South East
- K-märkt, cultural
- Regional Governance

- Kingdome of aluminium
- Heavy Vehicles
External endorsement on the importance of clusters

“The biggest reason to expect more clustering is that it works ... ...

...success tends to cluster.”
The Cluster Initiative Green Book

Reviews 250 clustering initiatives, world-wide

Foreword by Michael E Porter

TCI, September 2003
Responding Cluster Initiatives by Technology Area

- Information Technology 51
- Medical Devices 35
- Production Technology 32
- Communications Equipment 31
- Biopharmaceuticals 30
- Automotive 27
- Analytical Instr., Contr. Equip. 24
- Metal Manufacturing 24
- Lighting & Electrical Equip 22
- Aerospace Vehicles, Defence 18
- Plastics 18
- Construction Materials 17
- Entertainment 16
- Transportation & Logistics 15
- Furniture 13
- Processed Food 13
- Business Services 12
Responding to Cluster Initiatives

- New Zealand: 32
- USA: 28
- U K: 25
- Japan: 20
- Australia: 13
- Austria: 13
- Spain: 13
- Finland: 11
- Sweden: 11
- Germany: 10
- Belgium: 8
- Denmark: 8
- France: 5
- Hungary: 5
- Netherlands: 5
- Canada: 4
- Norway: 4
Step 2: Identifying local clusters
Priorities for early government attention

Short listed cluster should:

- Draw on the region’s strengths, specialisations
- May center on a specialised capability, a cultural strength, a technology
  - e.g. Sweden’s Telematics Valley draws on GPS, ICT, sensor & auto activities
- Already generate ‘export’ income
- Already have a range of firms
- Have appeal for funders
Cluster Identification

(1) Top down

- Gathering hard data
  - Ranking most successful firms in region
    - By employees, turnover, exports,..
  - Input-output analysis
  - Employment statistics
  - Location quotients...

Identifies: large, mainstream clusters
Cluster Identification

(2) Bottom Up

Qualitative, ‘wise-person’ insights
- Workshops, discussions, interviews

Identifies:
- Niche, emerging clusters
- And the more specific specialisation
  - Not ‘wood processing’ but ‘chairs’
  - Not ‘electronics’ but ‘mobile telecommunications’
  - Not ‘food processing’ but ‘airline catering’

Complements top down, data driven identification
### Clusters: building on specialisations

#### US Baby Silicons: differentiated

<table>
<thead>
<tr>
<th>Region</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td><em>Multimedia Gulch</em></td>
</tr>
<tr>
<td></td>
<td>Internet activity concentrated on digital media and B2C.</td>
</tr>
<tr>
<td>Los Angeles</td>
<td><em>Digital Coast</em></td>
</tr>
<tr>
<td></td>
<td>Strongest Internet segments: Content services, alternative media</td>
</tr>
<tr>
<td>Chicago</td>
<td><em>Silicon City</em></td>
</tr>
<tr>
<td></td>
<td>B2B segment, leveraging the city’s strong industrial expertise.</td>
</tr>
<tr>
<td>New York</td>
<td><em>Silicon Alley</em></td>
</tr>
<tr>
<td></td>
<td>Financial services, new media leveraging New York’s traditional industries.</td>
</tr>
<tr>
<td>Miami</td>
<td><em>Silicon Beach</em></td>
</tr>
<tr>
<td></td>
<td>Hub for Latin American Internet companies</td>
</tr>
</tbody>
</table>
Prioritising clusters for government support
Criteria could include:

- Relative size: local and national impact
- Export potential; High value-added activity
- Core competencies: traditions, specialist soft infrastructure:
  - Human resources/skills, local research institute
- Motivation, openness to cooperation, availability of ‘champions’
- Snowball effect/chain reaction: interconnectedness to rest of economy
- Appeal to funders
- Opportunity for early wins
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Step 3: Initial Cluster Analysis

Two thrusts:

1. **Initial competitiveness diagnosis**, understanding cluster’s current situation: structure, scale, opportunities, constraints, culture, ...

2. **Establishing platform for action**
   Introducing the process, gaining support of key players, identifying potential leaders.
Step 4: Building the Leadership Group

Active clustering needs:

- Commitment from preferred leaders
- A Group with a balance of skills, able to work as a team

Facilitator has a key role in establishing Group
Leadership Group: The cluster’s movers & shakers

- Cluster facilitator invites participation, usually a member
- Less than 10 people, drawn from private and public sectors, but not dominated by government & association officials
- Private sector culture
- Initially senior stakeholders
Building the Leadership Group

- The full Group does not need to be in place straight away
- Extend Leadership Group through temporary teams with issue focuses
- Minimise danger of “volunteer burn-out”
- Government supported, but not sole implementer
Step 5. The Preferred Future
The vision

Building on the cluster’s current competitive position, with a challenge, a *stretch* factor
We will make St. John’s, Newfoundland an international destination of choice in ocean technology.
Bangladesh knitwear sector, 2010
Initial preferred future, 2010

• Bangladesh is a world-class supplier of quality knitwear.
• We have earned a reputation for service, product innovation, market understanding.
• Exports have doubled to $5-6 billion, with strong growth in the US market.
Step 6. Identifying the Stepping Stones

- Looking back from the future: **Back casting**

- **Not** a continuation of the present (Forecasting)
Example: Key stepping stones to achieving the vision
Newfoundland Ocean Engineering

1. Leadership, cluster culture, teamwork
2. Skills upgrading, aligning industry needs with university
3. Branding the cluster, market development
4. R & D, technology transfer
5. Finance, venture capital
Step 7. Immediate Action Agenda

Importance

Crucial

Marginal

Is it “Doable”?

Easy

Hard

Immediate Priority

2nd Generation Initiatives
Example: Early Action Agendas
Newfoundland Ocean Engineering

Stepping Stone:
• Branding the cluster, market development

Early Action
• Cluster web site, portal
• Inward /outward missions
• Proactive media coverage
• Airport signage

Initial team: Dave Rideout, Terry Courish, Brian Wade, Mike Rose
Step 8: Cluster launch

- A ‘Town Hall’ public event
- 3-6 months after final workshop
- Highlight some success from initial actions
- And the forward agenda
Step 9: Formalising the Cluster

- The clustering initiative ultimately needs a home, a formal organisation
- Facilitator needs to handle carefully
  - May take 1-2 years to establish
  - May be a clutter of existing organizations
- Structure must fit with strategy
- Leadership Group now elected, membership fees introduced
Step 10: Upgrading the strategic agenda
Moving beyond the initial activity
Longer term, more substantive initiatives

- Understanding the competitive position, the local specialisation
- Benchmarking v. other clusters
- Building personal relationships
- Moving up the integrity ladder
- Incubation Centers, Technology Parks
- Identity development, creating social glue
Longer term agenda:
IT Incubator
Cape Town
Home for 35 + start-ups
Step 11: Cluster Process Review

- Often 12-18 months after the launch
- Successes & failures
- The pay-off from the clustering process
- Value of an independent, external reviewer
- Annual firm surveys
- Dump slower initiatives
- Appropriate Leadership Group?
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Step 12: Linking the cluster

Leverage through linkages with other clusters

1. Within the region
   - e.g. Reykjavik Seafood & Reykjavik Tourism

2. Nationally
   - e.g. Reykjavik and other Icelandic seafood clusters

3. Internationally
   - e.g. Reykjavik and Nelson, NZ
DKA Business Network Project
Developing linkages (1) within each community, (2) across the desert...

Pilot regions
- Alice Springs
- Broken Hill
- Kalgoorlie-Boulder
- Mount Isa
- Upper Spencer Gulf

Pilot sectors
- Sustainable Buildings
- Tourism
- Bush Produce
- Mining Services
...and then across the world’s deserts

World’s deserts: One billion people; 1/3 earth’s land surface
Australia 11% of world desert
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Clustering initiatives
The pay-offs

- Creating trust, linkages between firms:
  - Facilitates specialisation
  - Builds critical mass
- Creating a commercial magnet:
  - Attracts customers, new investment, new skills, specialised infrastructure...
- Alignment of public & private investments
- Building an ‘innovation environment’
Cluster development
To summarise

- Local, not national, focus
- Fact based
- Triple helix engagement
- *Action* orientated