



**CLUSTER NAVIGATORS**  
*nurturing competitiveness*

# CLUSTER DEVELOPMENT HANDBOOK

## IFOR FFWCS-WILLIAMS

Cluster development is now a mainstream approach for regional economic development globally.

This practical reference guide is based on two decades of hands-on cluster development experience, covering six continents and exposure to over a thousand clusters.

This 240 page handbook is available as an e-book, pdf and in hard copy. For this 2nd edition, the handbook has been comprehensively revised, updated and extended.

Sixty-four cluster experts, from twenty-eight countries, have contributed Invited Forewords to specific chapters. Most are TCI Network members.

Over 300 quotations are used, identifying further information sources.

The book was launched at TCI's 2016 Annual Global Conference in Eindhoven, Netherlands.



The handbook provides practical guidance, using examples from around the world.

<p><b>For regional and national economic development agencies</b></p> <p><b>For multilateral agencies, NGOs</b></p>	<ul style="list-style-type: none"> <li>• Cluster origins</li> <li>• Logic for cluster support</li> <li>• Preconditions to a clustering initiative</li> <li>• Designing cluster interventions</li> <li>• Cluster identification, prioritisation</li> <li>• <i>Stagnating</i> v. dynamic clusters</li> <li>• Regional specialisation v. diversification</li> <li>• Industry parks, incubators &amp; clusters</li> <li>• FDI &amp; clusters</li> <li>• Cluster life cycles</li> <li>• Building agency alignment</li> <li>• Agency support over time</li> <li>• Measurement &amp; Evaluation</li> </ul>
<p><b>For cluster organisations and cluster managers</b></p> <p><b>Advice of relevance to established clustering initiatives, and for start-ups.</b></p>	<ul style="list-style-type: none"> <li>• <i>Stagnating</i> v. dynamic clustering initiatives</li> <li>• Characteristics, successful clustering initiatives</li> <li>• Cluster manager profile</li> <li>• Challenges in cluster development</li> <li>• Analysis frameworks, check lists</li> <li>• Designing the Governance Board</li> <li>• Clustering initiatives at risk</li> <li>• Advice to cluster managers</li> </ul>
<p><b>For businesses, industry associations, chambers of commerce</b></p>	<ul style="list-style-type: none"> <li>• Business in the lead</li> <li>• Strong clusters, strong businesses</li> <li>• Benefits to business</li> <li>• Roles in cluster development</li> </ul>
<p><b>For academia: tertiary institutions, vocational training, public R&amp;D and high schools</b></p>	<ul style="list-style-type: none"> <li>• Knowledge underpinning, active engagement</li> <li>• Alignment with local absorptive capacity</li> <li>• Bridges to external knowledge</li> <li>• Examples of academic involvement</li> </ul>

## Book Structure

The first part of the handbook explores 'The What?' and 'The Why?' of cluster development. It opens with an external look at the natural phenomena of clusters, introducing many from around the world. It then takes an inside exploration, identifying common aspects of successful clusters. Alternative approaches to regional economic development are explored, with cluster development highlighted as a Centre Stage strategy.

Challenges in cluster development are identified and the key role of cluster managers explored. The Invited Forewords to that chapter has contributions from eleven cluster managers in ten countries, including the four who have been acknowledged as the 'European Cluster Manager of the Year'. Advice for cluster managers is presented.

'Triple Helix in Action' reviews three key dimensions in cluster development: businesses firmly in the lead, public agencies in support and academic underpinning.

The second part of the handbook, '**Cluster Development in Twelve Steps**', identifies in detail 'The How?' of cluster development. These steps include cluster identification, cluster analysis, the cluster's governance board and measurement & evaluation. The contents are of relevance for kick-starting a new clustering initiative and for revitalising an exiting initiative.

This comprehensive handbook is 240 pages, A4 size.

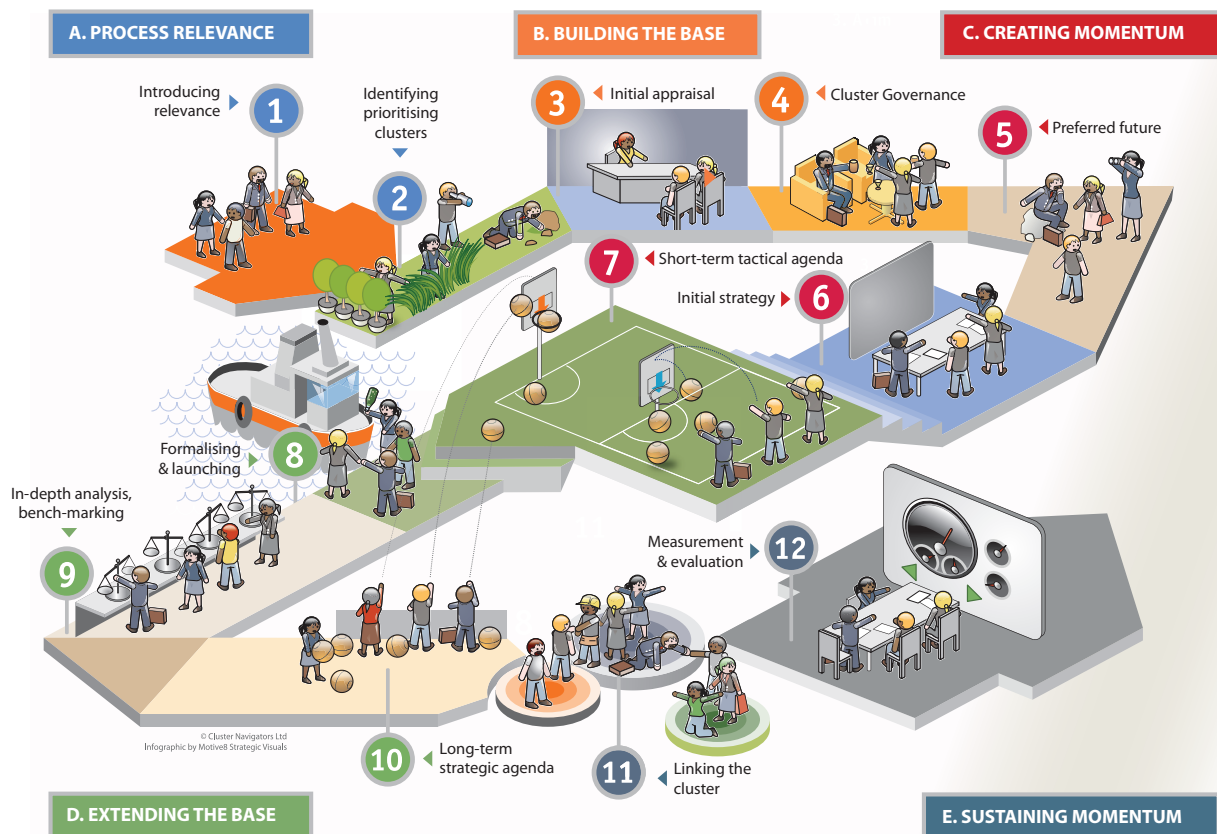
## About the author

Ifor Ffowcs-Williams is the CEO, Cluster Navigators Limited, Nelson, New Zealand.

Since establishing Cluster Navigators in 1997, Ifor's focus has been on the practicalities of cluster development. He leads strategy workshops around the world with economic development agencies, cluster groups and support organisations. Ifor is a frequent speaker on competitiveness, clusters and innovation.

Ifor has led training workshops on the Twelve Step cluster development process in over fifty countries. He has been described as 'one of the most influential cluster practitioners in the world'. Clients include The World Bank, UNDP, international aid agencies and national & regional economic development agencies on six continents.

Ifor is a Founder and Past President of TCI Network, the leading global network for practitioners, policy makers and business leaders addressing regional competitiveness.



# CLUSTER DEVELOPMENT HANDBOOK

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### Foreword, Dr Christian Ketels; Harvard Business School; President, TCI Network

#### 1.1 Clusters, a Natural Occurrence

Invited Forewords: Prof. Michael Enright (Hong Kong University), Prof. Torger Reve (BI Business School, Oslo) and Dr. Stuart Rosenfeld (RTS Inc., North Carolina).

- Examples from Around the World
- A Historic Perspective
- Defining 'Clusters'
- Cluster Origins
- Clusters, an External Perspective
- Wannabe Clusters
- Clusters Mature & Die
- An International Buyer's Perspective

#### 1.2 Clusters on the Inside

Invited Forewords: Joe Cortwright (Impresa Inc., Portland, Oregon); Mukesh Gulati (Foundation for SME Clusters, India); Eric Hansen, (Economic Transformations Group Inc., New York) and Bill Wicksteed (SQW, Cambridge, UK).

- The Tight Geography of Innovation
- Four Cluster Elements
- Contrasting *Stagnating* & Dynamic Clusters
- Cluster Life Cycle Stages
- Cluster Decline Elements

#### 1.3 Cluster Development: The Logic

Invited Forewords: Alison Dalziel (Localise, Perth, Australia); Dr David Wilson (Economic Development Agencies of New Zealand) and Dr Emily Wise (Lund University, Sweden)

- Economic Development Strategies, a Smorgasbord
- Big Shifts in the Business Environment
- Shifts in Public Policy
- Regional Economic Development Approaches
- Specialise, then Diversity
- Sectors, Value Chains and Smart Specialisations
- European Union's Competitiveness Agenda
- The Death of Distance?
- A Case Against Cluster Development
- Why Cluster Development Matters

## **2.0 Cluster Development by Design**

Invited Forewords: Lars Christensen (Region Värmland, Sweden); Dr. Gerd Meier zu Köcker (Agency Competence Cluster Germany) and Prof. Örjan Sölvell (Stockholm School of Economics).

- Contrasting *Stagnating* & Dynamic Clustering Initiatives
- Common Characteristics, Dynamic Clustering Initiatives
- Cluster Development Challenges
- Cluster Organisations as Bridges
- Differentiating Industry and Cluster Associations
- Cluster Organisations as Network Integrators

### **2.1 Cluster Manager as the Glue**

Invited Forewords: EU Cluster Managers of the Year, Dr. Stan Higgins, UK (2014); Micael Gustafsson, Sweden (2012); Johan Bång, Sweden (2010); Christoph Beer, Switzerland (2008);

with Pavla Bruskova (National Cluster Association, Czech Republic); Merete Nielson (Cluster Excellence Denmark); Tracy Scott-Rimington (Regional Development Australia, Brisbane); Vincent Dugré (Ground Transportation Cluster, Quebec); Klaus Hassis (Innovation Coach, Germany); Lucia Steel (Cluster Consultant, Austria) and Dr. Flower Msuya (Seaweed Cluster, Zanzibar).

- The Cluster Manager's Role
- The Cluster Manager, Complex Ingredients
- Common Characteristics, Cluster Managers
- The Cluster Manager: A Rare Jewel
- Advice to Cluster Managers

### **3.0 Triple Helix in Action**

Invited Forewords: Prof. Fernando Alberti (Institute for Entrepreneurship and Innovation – LIUC, Italy); Andrew Martin (Welsh Government) and Bethan Sian Jones (Menter a Busnes, Wales)

- Different Motivations

### **3.1 Business in the Lead**

Invited Forewords: Dr. Robert Breault (Arizona Optics Cluster); Jaime Echeverri (Medellin Chamber of Commerce, Colombia); Ted Lyman (IHS Global Insight, San Francisco); Alonso Ramos (Chihuahua, Mexico)

- Strong Clusters, Strong Businesses
- Business Engagement within a Clustering Initiative
- Private Sector's Lead Role in Cluster Development

### **3.2 Public Agencies in Support**

Invited Forewords: Joep Brouwers (Brainport, Netherlands); Prof. Piero Formica (International Entrepreneurial Academy, Italy); Murat Gürsoy (UNDP, Turkey); Cecilia Johansson & Emily Wise (VINNOVA, Sweden); Kevin Murphy (JE Austin, Washington DC); Alberto Pezzi (Government of Catalonia); the late Frederic Richard (UNIDO, Austria); Nikhil Treebhohun (Global Finance Mauritius); Stuart Trundle (Venture Taranaki, New Zealand) and Douglas Zeng (World Bank).

- Don't Even try to Create a Cluster
- Logic for Public Support
- Agency Coordination Failures
- Public Agency Instruments over a Cluster's Life Cycle
- FDI and Clusters

- Industry Parks & Incubators, sharing know-how
- Cluster Support Programme Examples
- Advice to Regional Agencies

### **3.3 Academic Underpinning**

Invited Forewords: Per Eriksson (Sweden); Dr. Frédéric Miribel (Invest in Lyon–Aderly, France) and Tony Caughey (Young Enterprise Trust, New Zealand).

- Strong Clusters, Strong Knowledge Centres
- Enhancing the Regional Specialisations
- Alignment with Local Absorptive Capacity
- Bridges to External Knowledge
- Universities as Inside Partners; Examples
- Universities on the Outside
- Public Research Institutions
- Technical, Vocational and Community Colleges
- High Schools
- Advice to Academia

### **Cluster Development in Twelve Steps**

Invited Forewords: Maria Engholm (Triple Steelix Cluster, Sweden); Juan Manuel Esteban (Basque Government); Nigel Gwynne-Evans (Department of Trade & Industry, South Africa) and Lluís Ramis (Cluster Development, Barcelona).

- Intervention Design Principles
- Urban v. Rural Clusters: Differences
- Cluster Development by Design
- Cluster Development, Indicative Timeline
- Checklists and **Danger Signs** are presented at the end of each Step

### **4.1 Introducing Relevance**

Invited Forewords: Vyacheslav Gerashehenko (Kyiv Mohyla Business School, Ukraine) and Mereia Volavola (Pacific Island Private Sector Organisations, Fiji).

- What does a Clustering Initiative Do?
- Cluster Development Centre Stage, the integrator
- Who Sponsors a Clustering Initiative?
- Garnering Support
- Kick-starting a Clustering Process

### **4.2 Cluster Identification**

Invited Forewords: Dr. Göran Lindquist (Stockholm School of Economics) and Jamison Steeve (Institute for Competitiveness & Prosperity, Toronto).

- Do We Have a Cluster?
- Segmenting a Regional Economy: the Traded Clusters
- Drive-by Cluster Identification; A Google Eye View
- Top-down Cluster Identification ... Quantitative
- Bottom-up Cluster Identification ... Qualitative
- Narrowing the Cluster's Competency Boundary

- Establishing the Cluster's Geographic Boundaries
- Go with the Strong Clusters
- And Engage with the Emerging Clusters
- 'High Tech' is Highly Irrelevant
- What is NOT a cluster?
- Prioritising Clusters for Public Support
- Identifying through Competition, European Experiences
- Establishing a Portfolio of Clustering Initiatives

### **4.3 Initial Appraisal**

Invited Foreword: Werner Pamminer (Clusterland Upper Austria).

- Cluster Analysis in Two Steps
- Cluster Manager Leads the Appraisal
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- Kick-off Cluster Muster
- Gathering Published Data, Statistics
- Mapping the Cluster
- Interviewing Across the Cluster; Discussion Topics
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- Preparation of a Discussion Paper
- First Cluster Workshop

### **4.4 Cluster Governance**

Invited Forewords: Olav Bardalen (Innovation Norway); Manuel Montoya (Nuevo Leon Automotive Cluster, Mexico); Mats Williams (Paper Province Cluster, Sweden) and Dr. James Wilson (Orkestra – Basque Institute of Competitiveness, Spain).

- Board's Role, Responsibilities
- The Board's Style
- Designing a Triple Helix Board
- Establishing the Board
- Chairing the Board

### **4.5 Preferred Future**

- Where are we Heading?
- Establishing a Preferred Future, Examples

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  - Reducing Costs
  - Addressing Business Finance
  - Upgrading Physical Infrastructure
  - Policy Influence, Reform
- From Strategic Plan to Strategic Agenda
- Clusters Sub-dividing, Merging

#### **4.11 Linking the Cluster**

Invited Forewords: Mike Crowe (Desert Knowledge Australia); Professor Phil Cooke (Bergen University, Norway); Simone Hagenauer (Business Agency of Lower Austria) and Lucia Steel (European Cluster Collaboration Platform).

- Cluster Linking Logic
- Examples:
  - Linking within the Region
  - Linking Nationally
  - Linking Pan-Regionally
  - Linking Globally



#### 4.12 Measurement & Evaluation

Invited Forewords: Madeline Smith (Institute of Design Innovation, Scotland); Thomas Lämmer-Gamp (European Secretariat for Cluster Analysis, Berlin) and Frank Waeltring (Mesopartner, Germany).

- Motivations for Measuring Cluster Performance
- Measurement & Evaluation Complications
- Tailoring Performance Measurement to Cluster Life Cycle
- Who Undertakes the Review?
- Firm Surveys
- Evaluation Checklists, Eight Topics
- Clustering Initiatives at Risk
- Post Review Check List
- When to Walk Away
- Case Studies

#### 5.0 Cluster Development Fast Track

#### 6.0 Acknowledgements, Further Information

- TCI Network
- Authors on Competitiveness, Clusters & Regional Innovation
- Published Papers, Cluster Manuals
- Websites
- Video materials

## PRICING

<b>e-book:</b>	<b>US\$39.95</b>
<b>pdf version:</b>	<b>US\$69.95</b>
<b>B&amp;W spiral bound hard copy (incl post and packing)</b>	<b>US\$105.00</b>
<b>Colour spiral bound hard copy (incl post and packing)</b>	<b>US\$225.00</b>
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### Cluster Development Handbook

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