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The knowledge
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Get in the zone

From Australia to Finland, knowledge innovation zones (KIZ) are emerging in the quest for sustainable growth and economic development within cities, regions, countries and enterprises. **Debra Amidon** and **Bryan Elliot Davis** explain the role of KIZs within the KM arena and discuss combatting the global collaboration challenge.



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A knowledge innovation zone (KIZ) is a geographic region, economic sector or community of practice in which knowledge flows from origin to the point of highest need or opportunity to improve economic performance and socio-political wellbeing.

There are variations on this theme within KIZs as the zones encompass knowledge flows in urban cities such as Barcelona, Melbourne, Montreal and Manchester, as well as those in the rural or aboriginal communities of the Australian desert. What is common, however, is the desire to create thriving hubs of interaction that are smart, connected, highly educated, creative, liveable, safe, healthy and attractive to talented people and investors. Leaders are learning and followers are slowly awakening to the benefits KIZs can offer.

There is, though, a risk that inadequately prepared communities will jump onto the KIZ bandwagon without considering the architecture required in order to build upon their shared vision heritage. Many communities have experimented with building wired towns and cities and some governments have promised to build wired infrastructures. The knowledge focus has previously been on ICT infrastructures; an understanding of the human elements has been minimal at best and, in some cases, completely overlooked. Therefore, many KM projects have failed.

In the current climate, a similar fate awaits communities that focus on digital platforms rather than paying attention to KIZ citizen involvement. Some communities vigorously pursue new development paths while marginalising those left behind, creating not only a digital, but also a social divide.

Knowledgeable executives recognise intellectual wealth is the economic engine. Their leadership is ushering in an era of competitive collaborative advantage. Successful knowledge-based initiatives require a fundamental understanding of knowledge-performance

indicators, networked structures, knowledge roles and skills, innovation processes and collaborative technologies.

Lessons learnt

In the mid-1980s, experts were then analysing why companies were failing to achieve bottom-line results, despite IT-based modernisation. This dilemma – the technology paradox – was later labelled the productivity paradox. Productivity relates output to input and is a multi-variable rather than a linear problem. New rules for intangible and intellectual value to unravel the paradox have since been developed, tested, and in some cases, proven.

Three emerging rules, termed the laws of knowledge dynamics, have been identified:¹

- 1st law – knowledge multiplies when it is shared. Knowledge is a limitless and expandable source of economic wealth. Intellectual assets – effectively exploited through innovation – are the most valuable resource to manage;
- 2nd law – value is created when knowledge moves from the point of origin to the point of highest need or opportunity. Innovation encompasses the full spectrum, from idea creation to commercialisation, and successful innovation involves converting knowledge flows into marketable goods and services;
- 3rd law – collaboration for mutual leverage provides optimal utilisation of tangible and intangible resources within and across boundaries. Collaboration replaces the competitive (win/lose) paradigm prevalent today. Win/win benefits are based on pooling and leveraging competencies: knowledge, know-how and skills.

While not always explicitly recognised, these laws have driven and governed the efforts made to achieve stakeholder sustainability and prosperity – from ERP-

software-application developers and users, to ISPs and now KIZs.

KIZ foundations

The explicit management of knowledge or intellectual capital as a strategic resource is still evolving. In 1987, 'Managing the knowledge assets into the 21st century' was one of the first conferences to focus on enterprise productivity from this perspective and KM moved swiftly on to meso-economic levels of national economies. The World Bank developed new economic indicators, followed by the OECD and the United Nations, as organisations began to learn from the progressive steps others were taking in the KM field.

The internet has facilitated the growth of KIZs. What began as an attempt to catalyse co-operation among economic sectors, including government, industry and academia (now termed cross-sector integration), has matured into initiatives that sustain interdependencies within and across industries, municipalities, national and regional borders.

Knowledge innovation zones are evolving to capitalise on stakeholder collaboration and sustainability. Knowledge cities, when developed intelligently and in harmony with their environment, are good models for strategic intent on both a local and a global platform.

The future for KIZs

There is now a mass of sufficient resource and practice material to produce a definitive report on state-of-the-art KM and create a guidepost for the future. Standards will emerge that will be based on a sound understanding of next-generation knowledge-based economics and culture. A knowledge-cities manifesto has been drafted in order to illustrate how "human development depends not on having more but by being more – becoming a co-creator of the future of humanity".²

For the past five years, we have been tracking over 100 initiatives that exemplify this new mindset. The product of our learnings can be viewed at www.inthekzone.com. The global knowledge-zone map has been designed as a knowledge-sharing tool that provides links to the initiatives, comparative rankings, recommended readings, and conferences and symposia information.

Organisations have outlined programmes for interdependence and have succeeded in closing the digital divide and promoting a more equitable society and quality of life, both in the workplace and at home. There is a renewed sense of interest in an individual's relationship with the environment, the ecology of management systems and the enterprise's role and responsibility. There has been a sea change from the focus on limited resources – financial, human and technological – that defined the industrial

age. Through its research into knowledge-innovation trends, Entovation was able to clearly see that knowledge is the new, renewable asset (see box out on page 28).

Our research has shown us that we need a redirected focus on financial capital. Innovation is key to realising the intangible value hidden in interactions between people, nations and societies.

Continuing in-depth analysis of past and ongoing initiatives will provide a snapshot of the frames, business models, cultural imperatives and performance indicators – what works and what doesn't. Based upon our preliminary analysis of KIZ activity, there are primary indicators of emerging innovation practices that can gauge the strength of KIZ activity:

- Human capital – high education levels and deep pools of talent (including artists, scientists, entrepreneurs);
- Intellectual capital – advanced mental models, mindsets, values, IC metrics, intellectual-property patents and licensing activity;
- Infrastructure capital – directories and maps to knowledge repositories, resources, expertise, networks, and communities of interest and practice and networks of institutions of higher learning, such as libraries, universities, R&D labs, institutes, think tanks and art schools;
- Social capital – shared culture and a spirit of creativity and innovation, as well as collective respect for indigenous and local knowledge and customs;
- Relationship and network capital – extensive knowledge-oriented alliances and partnerships, intangible reputation capital, respect for others and adaptability.

Concepts in practice: contrasting models Melbourne

In Australia, City Plan 2010 is Melbourne City Council's primary planning strategy, which sets out a vision for development over the next ten years. As part of the city plan, which has an innovative and vital business theme, the council required a study of factors to consider when developing and maintaining a knowledge city and a set of strategic actions to realise this vision. These included:

- A state economy with sufficient critical mass to support world competitive specialisation;
- Dependable regulatory institutions;
- Responsive and creative bureaucracies;
- A high quality of life that would attract and retain knowledge workers;
- Research excellence;
- A competitive and collaborative business culture;

- A connective infrastructure;
- Networks of commercial influence;
- Market access and awareness;
- An inclusive, open and tolerant society;
- A collaborative model for implementation.

Barcelona

In a strategic plan that outlined culture as the 'motor of a knowledge city', executives and government officials embraced the idea that a city and culture are not only inter-related, but are two sides of the same coin. Culture is conceived as a fabric of living social relations and, at the same time, a product of these social relations. This central idea, that the city is the space where culture takes shape, must be assumed by all the public bodies so that city governments can be endowed with the necessary competences and resources, making the public management of culture more effective. From this position the city of Barcelona stimulated its role as the cultural capital of Catalonia, and eventually Forum 2004, by employing the following elements:

- Instruments that make knowledge accessible to citizens;
- A network of public libraries;
- Access to new communication technologies for all citizens;
- Cultural facilities and services that have a central educational strategy;
- A level of literacy that is in line with the average European level;
- A network of schools connected with artistic instruction;
- Respect for the diversity of cultural practices of its citizens;
- Civic centres that are open to diversity and that foster face-to-face relations;
- Availability of the tools required for citizens from all territories to express themselves;
- Instruments to make knowledge accessible.

However, these initiatives need to be linked to cross-fertilise intent and aspiration. Potential KIZ building blocks are emerging that could facilitate the construction of economies of scale, scope and learning, such as:

- Prototyping mechanisms to ensure the best concepts and theories being developed and practised provide a solid foundation for optimal performance;
- A knowledge-valuation process to chart direction and resolve the productivity paradox;
- Universal innovation metrics to ensure its future;
- The mindset and technology to enable people to share learning to eliminate unnecessary duplication of effort, destructive competition and re-invention.

Knowledge innovation – trends observed

- Networks – the influence of computing, network grids, business, and community networks is spreading, particularly the communities-of-practice phenomenon. Enterprises are operating as holonomies: the 'network' is becoming the business;
- Change – being flexible, adaptive, open to change, open to new ideas and willing to unlearn old ones, are essential management qualities. Innovation is the implementation of effective change management. However, rapid change is also elevating risks and stress;
- The internet – has spawned new communication capabilities, connectivity, market opportunities, communities, content and innovations, and pre-empted the arrival of the e-economy. It has also enabled the migration and shift from place to space, facilitating real-time service-delivery;
- Competition between business models – as well as products and services. Patents are being awarded for innovative and original business models;
- A 'free agent nation' and the 'talent war' – the dynamic marketplace for know-how, expertise and experience is expanding. This leads to the need for effective personalisation of services, better one-to-one customer relations and a focus on customer/stakeholder success;
- The virtualisation of markets for everything – we are seeing a shift towards fast-paced electronic markets and the spread of virtual organisations and communities as knowledge flows freely across boundaries;
- Globalisation – interdependency and interconnectedness is facilitating the 'death of distance'. Mergers and acquisitions create an ever larger global conglomeration. People's intangible value, in interaction with one another, is the critical performance metric;
- Open source – open-source software is growing and citizens desire openness and transparency in governance, while a parallel counter-trend towards securing intellectual-property rights is also in evidence;
- Growing value of intangibles – creativity, innovativeness, reputation, technological prowess, diversity and brand are enabling the growth of weightless wealth and digital and intellectual capital. Ideas are the new currency and reporting is now required by FASB and the IASB;
- From industrial to digital economy – the global economy is shifting to one centred on information, creative ideas, knowledge and the bio-economy;
- I visualise, therefore I can do – imagination and visualisation technologies are pre-cursors to deep-knowledge mastery, high levels of expertise and improved performance. Computer-enhanced visualisation technologies are enabling us to model, simulate, understand and then act;³
- The emergence of knowledge zones – the expansion of the knowledge-based economy is spawning a growing interest in deep-knowledge clustering, pools of expertise and high-tech facilities in KIZs. These zones are enabling new forms of enterprise, collaboration, co-operation, R&D, innovation, knowledge sharing, and commercialisation of ideas, between the private sector, government and academia.

Oresund region – a cross-border example

In an experiment for the Oresund region, an initiative between Copenhagen, Denmark, and Malmö, Sweden, we examined the benefits of creating an economic zone by constructing a bridge across the Baltic. We explored the initiative from a management construct designed to link performance, structure, people, process and technology, using these elements to explore the interdependence of variables for an enterprise, nation or region with cross-border/boundary opportunities.

What we have learnt:⁴

- In knowledge economics, what we count matters. As imprecise as it may seem,

we need to measure intangible, hidden, intellectual wealth and the way in which it is created and leveraged;

- Knowledge structures operate as holonomies – a nesting of networks – that have both local and global scope. We need to understand how they connect as communities and spheres of influence;
- Although originally described as high technology or white collar, we are all knowledge workers. We need to determine what motivates constructive behaviours, modes of interdependence and collaboration;
- Knowledge processes can fit under the rubric of innovation but an innovation

redefined according to flow of knowledge. We need to discover ways to measure how knowledge is created, shared and applied;

- The power of knowledge-processing technology is advancing beyond expectation. Technology isn't an end but a means and we must take advantage of technology to facilitate the evolution of KIZs.

The dialogue has been launched; our challenge now is to create collaborative advantage on a worldwide scale. We anticipate massive global investment in the KIZ concept over the next decade. To ensure a positive ROI, we can measure tangibles and monitor the performance of any system such that inputs are calibrated against the outputs of value: products and services. For organisations, a network of businesses, a country or a global inter-related set of countries, this dynamic measure is a step towards the evolution of a new economy. This focus has put us on the path to understanding the real value of intangible wealth, how it is created and how it contributes to profitability and prosperity.

We need to review the emergence and expression of KIZs in real situations and profile leading contenders, selective cases and conduct interviews. A new taxonomy is required to organise, classify, categorise and make sense of a family of inter-related concepts and ideas. It is also essential to examine and disseminate the creation of fresh opportunities, profit from leading insights, the tools of knowledge exchange and knowledge arbitrage.

World leaders met in Bretton Woods, New Hampshire in 1944. There, Henry Morgenthau outlined plans for the "creation of a dynamic world community in which the peoples of every nation will be able to realise their potentialities for peace". The leaders abandoned gold as a world monetary standard because it was limiting the global economy.

We have now entered the innovation frontier. Intellectual capital, properly leveraged via innovation, is the new currency that provides a different paradigm from previous agricultural, industrial or service economies. It is a currency that rests on the value of human potential and how it can be leveraged. The world is now our landscape and history will document our success. ■

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