

香港生產力促進局

智力資本報告

The Intellectual Capital Statement

of Hong Kong
Productivity Council
2008/09

Human Capital

Relational Capital

Structural Capital

前言

Preface

在知識經濟下，無形資產的生產力具有舉足輕重的影響。然而，人們往往未能有系統地發現和運用這些隱藏資產；傳統的審計制度也未有充份闡明這些無形資產的價值。香港生產力促進局必須將智力資本加入其策略發展藍圖，積極提升香港的知識生產力。

此報告展示生產力局多項領先及卓越的能力，也是該局首次嘗試系統地整理、有效地運用其無形資產。這些資產分為三個主要範疇：人力資本、網絡資本及結構資本，統稱為「智力資本」，將可為生產力局指引未來的業務方向。

報告突顯出生產力局多項核心競爭力，但局內卻較少互相分享其網絡建立能力。因此，生產力局內部及外部的智力資本仍有廣闊的發展空間，必須致力加以系統化及創新，為香港開拓未來的新領域。

In the Knowledge Economy, productivity of the Intangibles will be of utmost importance. These hidden dimensions are often sensed, realized and acted upon unsystematically. Furthermore they are not accounted for in traditional reports. For the contribution of HKPC to the knowledge productivity of Hong Kong it is essential to develop these new maps for its strategic potential.

This report on the many leading and excellent capabilities of HKPC is a first effort to start the development of a systematized mapping approach for leveraging these intangible assets. These dimensions can be reported in 3 major areas: Human Capital, Relational Capital and Structural Capital. The systematized combination of these areas is called Intellectual Capital, and indicates the future earnings capabilities for HKPC.

It highlights the many key competence areas of HKPC, but internally less well shared, its huge networking and relational dimensions of HKPC. In other words the potential is there for internal and external systematization and innovation of its Intellectual Capital. This is futurizing for both HKPC as well as Hong Kong.



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導言 Foreword

香港經濟正在轉型，首當其衝需要改變思維的是製造業，現在則是服務業。隨著珠三角地區的工資不斷上升及工業政策的轉變，迫使香港各行各業致力提升產品及服務的附加值，否則便要將生產設施遷移至內陸地區以降低成本。經濟全球化亦對香港企業構成額外壓力，企業管治、企業社會責任、碳足印及其他有關環保的訴求等只是企業及機構需要應付的部分全球化課題。面對種種因業務型式轉移所帶來的挑戰，企業必須在管理、生產、科研，以至市場推廣及銷售方面掌握新的技術及知識，以求在這巨變中穩操勝券。

香港生產力促進局(生產力局)作為支援工商業的主要法定機構，會在每年的年報內清楚刊載業績及工作成果。這份《智力資本報告》，則旨在更清晰及明確地闡述本局的服務及知識資產中一些隱藏部份，這些部份對價值創造流程十分重要，但卻往往被忽略。藉此，我們期望此報告有助業界及社會各界從現在到未來都可以更適當地運用生產力局的服務及資源。

Hong Kong economy is in transition. The first to face a paradigm shift is the manufacturing sector. The rising wages and the changes in industrial policy in the Pearl River Delta (PRD) have forced the sector to either move up the value-added ladder or to move further inland. Globalisation also places extra demands on our companies. Corporate governance, corporate social responsibility, carbon footprints and other aspects of the Green movement are just some of the global issues that manufacturers have to grapple with. Paradigm shift demands companies to master new skills and technologies in management, production, innovation and marketing and sales.

The achievements of Hong Kong Productivity Council (HKPC) as a key industrial support statutory organization are included in its Annual Report. This Intellectual Capital Statement is compiled to make transparent the value-creation processes of the services of HKPC, so that all stakeholders can make the best use of what HKPC can offer, both now and in the future.

生產力局的使命 HKPC Mission

生產力局的使命是為香港各行各業提供綜合支援服務，協助香港企業更有效地運用資源，提高產品和服務的附加價值，以達致卓越生產力，加強國際競爭優勢。故此，生產力局致力從技術轉移、管理技巧及系統等多方面協助企業達到世界級水準。為履行使命，生產力局必須於本港及海外調配內部及外界資源，以邁進智力資本生產力的時代。

The mission of HKPC is to promote productivity excellence through the provision of integrated support across the value chain of Hong Kong firms, in order to achieve a more effective utilization of resources, to enhance the value-added content of products and services, and to increase international competitiveness. This means that HKPC needs to help industry to become and remain world class in a number of areas, including technologies of all kinds and many aspects of management techniques and systems. In order to achieve its mission, HKPC will need to deploy both internal and external resources, inside and outside Hong Kong for a new generation of IC productivity.

獨特優勢 Unique Strength

許多時候，資源縱使充裕，但嚴峻的挑戰是如何結合及調動資源以達到預期的結果。在商業世界裏，人們普遍認為「官、產、學」三方合作模式可以加強國際競爭力，部分北歐國家稱之為「Triple Helix」。在內地，這種模式有時甚至進一步發展成為「官、產、學、研、資」(Quintuple Helix) 五方合作的模式。

生產力局作為中立的法定機構，最適宜推動「官、產、學、研、資」合作模式，以支援業界發展。這份報告亦會展示生產力局如何將這種合作模式伸展至香港以外地區。生產力局之所以能夠擔當這個推動角色，全憑其擁有的無形資本，包括技術知識及過去40多年來所累積的管理經驗。生產力局亦是香港少數能夠提供綜合服務平台的機構，並擁有多元化知識及各行各業的項目經驗。

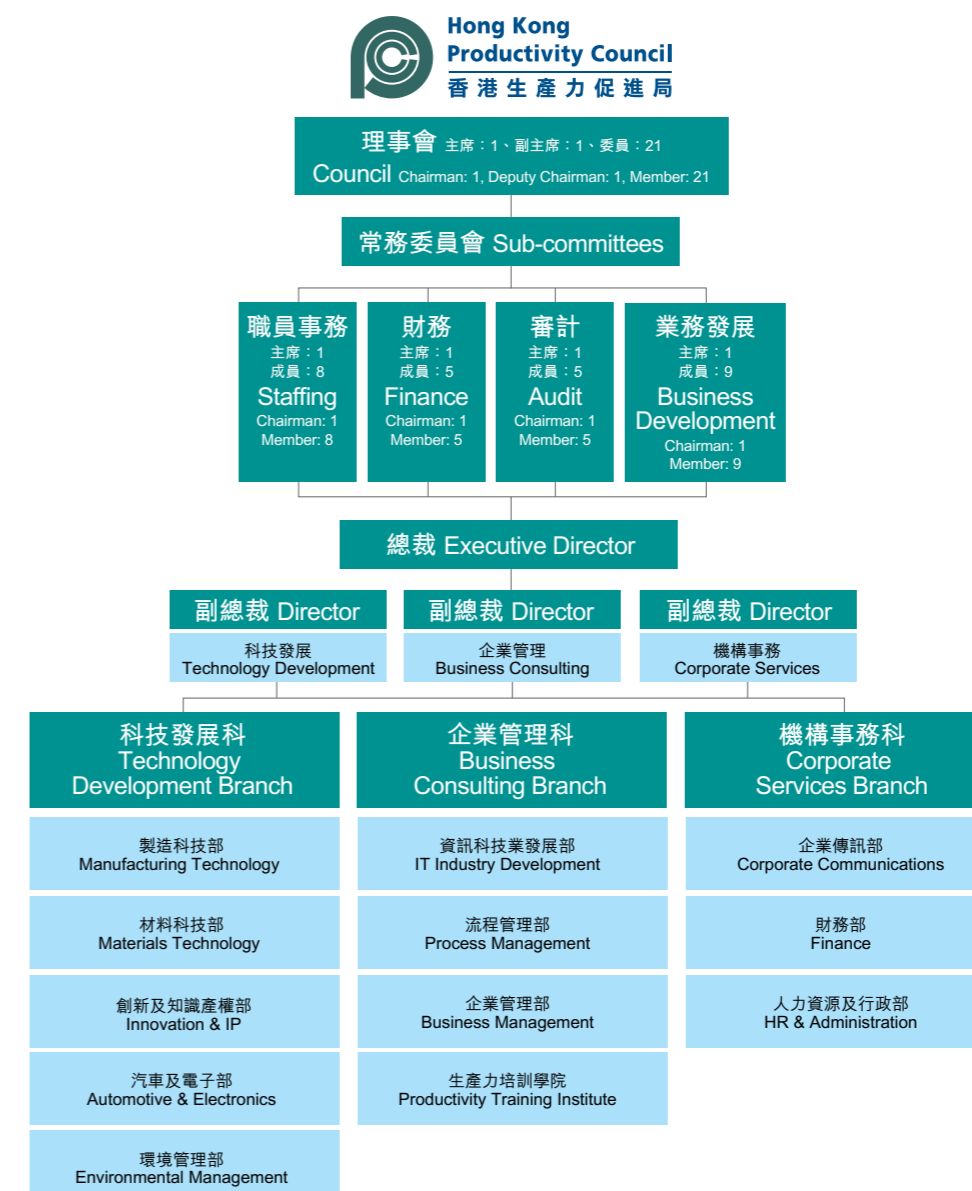
Resources are plentiful. The main challenge is to combine and channel various resources to achieve the desired results. In the business area, it is commonly accepted that accelerated international competitiveness is a result of tripartite collaboration among Government, Industry and Academia, referred to as Triple Helix in some Northern European countries. On the Mainland, it is sometimes extended to become a Quintuple Helix of Government, Industry, Academia, Research Institutes and the Financiers.

As a statutory organization, HKPC is characterised by its impartialness. HKPC is well placed to weave this Quintuple Helix in support of industry, and as shown in this report, the Helix extends outside Hong Kong. The competence of HKPC in playing such a role relies mainly on its capitals (both the tangible and intangible capitals) cumulated over the past 40 years. There are not many organizations in Hong Kong that could deliver integrated platform-based services with a strong support of multi-disciplinary knowledge and project experience in different industrial sectors.

生產力局的組織架構 Organization of HKPC

生產力局自成立以來主要透過提供不同的平台及顧問服務，以協助及支援企業提升其管理體系及科技，回應營商環境轉變的巨大挑戰。生產力局提供技術轉移、顧問及培訓等廣泛服務，涵蓋生產科技、資訊科技、環境科技及管理系統等範疇。

Since its establishment, HKPC has been playing a key role in assisting and supporting companies to cope with paradigm shift by providing platforms and consultancy services to facilitate the upgrade and advancement of management systems and technologies of companies. HKPC provides a multitude of services in technology transfer, consultancy, training and other support services in four core profile areas: advanced manufacturing technology, information technology, environmental technology and management systems.



圖表一. 香港生產力促進局的組織架構
Figure 1. Organizational Structure of HKPC

生產力局簡介

生產力局的理事會包括1名主席及1名副主席，合共23名委員，來自資方、勞工界、學術界及政府部門。

生產力局設有3個科，共11個部門及1間培訓學院，擁有超過200名專業職級員工；此外在其總部生產力大樓設有28個卓越中心、10個實驗室、展覽廳及一系列培訓設施。

生產力局亦於廣州、東莞及深圳設有三間全資附屬公司，服務區內的廠商。

Corporate Profile

The governing Council of HKPC, headed by one Chairman and one Deputy Chairman, comprises 23 members in total, representing businessmen, trade unionists, academia and government officials.

HKPC, with over 200 professional staff, organized around 3 major branches with 11 divisions and 1 training institute. It has 28 Centres of Excellence, 10 testing laboratories, as well as exhibition and training facilities in the headquarters.

HKPC also operates three wholly owned subsidiaries in Guangzhou, Dongguan, and Shenzhen to serve regional manufacturers.

智力資本 Intellectual Capital

甚麼是智力資本？

根據《牛津英語字典》，「Intellect」一詞解作「a person's mental power」（人的智力），而「capital」解作「wealth invested or lent」（投資及借貸的財產）。「Capital」一字源自拉丁文「caput」，解作「頭腦」。因此，「智力資本」指一間機構擁有能夠產生財富的所有無形資產。

What is Intellectual Capital?

According to Oxford English Dictionary, intellect is "a person's mental powers" and capital is "wealth invested or lent", and comes from the Latin word caput, meaning "head". Intellectual Capital refers to all the wealth-producing intangible assets owned by an organization.

很多人首次接觸「智力資本」一詞時，會聯想起「知識產權」或「人力資本」。事實上，智力資本所涉及的内容較其餘兩者更加廣闊。它不但包括人力資本，即機構內員工具備的所有經驗、技能及知識；亦包括被公認為智力資本之父的 Professor Leif Edvinsson 所稱之為的結構資本。Professor Leif Edvinsson 指出結構資本是那些「當所有員工離開機構後仍保留下來，但卻甚少在資產負債表顯示出來的資產。」知識產權、工作流程及企業文化等都屬於結構資本。此外，智力資本亦包括了網絡資本，即在機構以外的資源，例如顧客及供應商的忠誠度，機構可善用這些資源帶來經濟利益。

生產力局的智力資本報告

有形資產只能創造有限的競爭優勢。智力資本、員工、作業方式及業務網絡才能夠令機構獨一無二及靈活應變。這份《智力資本報告》供不同的相關伙伴瞭解生產力局所擁有的無形資產，以及本局如何運用這些資產服務工商企業。

生產力局服務香港工商業40多年，其擁有的智力資本不但令本局在過去有出色的表現，亦同樣會在未來為本局的持續成功作出貢獻。無人能夠預知香港及工商業的未來，但這份《智力資本報告》盤點了生產力局所擁有的智力資本，期望讓業界及各有關人士，不論是現在或將來，都能透過此報告更能深入認識和利用本局的服務及價值。

When first come across of the term intellectual capital (IC), many people either associate it with intellectual property or with human capital. IC, however, is much broader than both. It includes all the experience, skills and knowledge of people in the organization as Human Capital. It also includes Structural Capital that, in the words of Professor Leif Edvinsson who is commonly known as the grandfather of IC, is "the assets found in an organization after all the employees have gone home, but seldom appear in the Balance Sheet". Intellectual properties, work procedures and even corporate culture fall under this category. IC also covers Relational Capital, meaning resources external to an organization such as customer and vendor loyalty that an organization can make use of and turn into economic results.

HKPC Intellectual Capital Statement

Physical assets confer few and limiting competitive advantages. What makes an organization unique and agile is its IC; its people, its way of doing things, and its business network. This IC Statement is a means for various concerned parties to understand what intangible assets HKPC has, and how these assets are deployed by HKPC in service of industry.

HKPC has been serving Hong Kong industry for more than four decades. Its ICs have served HKPC well in the past, and will continue to contribute to its continuing success in the future. While nobody can predict what the future holds for Hong Kong and its industries, this IC Statement takes stock of what HKPC has and communicates the IC in its possession to all concerned, so that stakeholders will know how HKPC could be of service and value to them, both now and in the future.

生產力局的智力資本模型

這是生產力局首份智力資本報告。這份報告以一個業務流程模型為基礎，闡述了本局現在及未來為工商業所提供的服務，並突顯本局以平台的模式為企業及整個行業提供支援。在這模型中，生產力局是主要的參與者，一方面投放本局的人力、結構及網絡資本，再加上其他相關參與者的引導，將這些資本轉化成切合業界需要的服務及計劃。模型中的主要流程闡述了生產力局的工作，既提供個別服務以協助企業在其增值鏈上提升生產力，亦建立公共的服務平台，為業界策劃多項免費支援服務。

HKPC Intellectual Capital Model

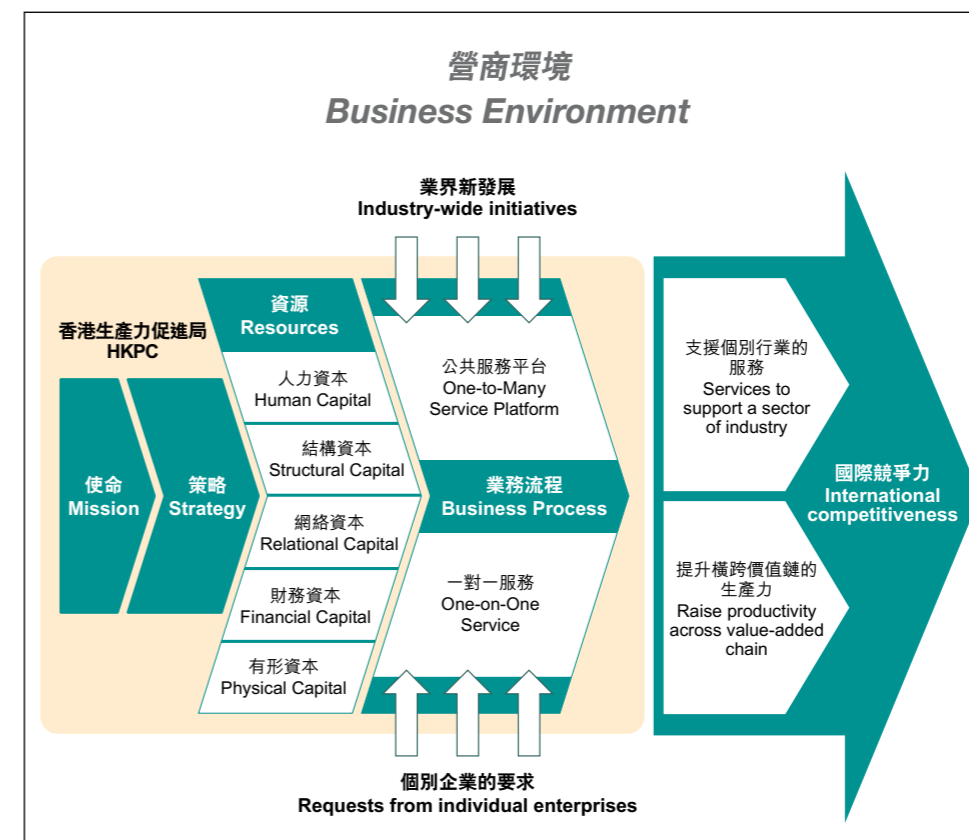
This is the first ever IC Report of HKPC. This report is based on a process model that describes the creation of present and future services to industry. The model symbolises the services and industry-wide initiatives of HKPC as a platform. As the main player, HKPC puts onto the platform its human, structural and relational capital and, guided by the relevant players, transforms them into services and initiatives that meet the needs of industry. The key processes describe the work of HKPC, in providing one-on-one services in helping firms to raise their productivity across their value-added chain, and in providing a one-to-many service platform in supporting a host of complimentary services to a sector of industry.

為何需要管理智力資本？

智力資本是通向未來的鑰匙。商業環境及行業情況瞬息萬變。製造商發覺到他們的產品推出市場後數個月便因過時而遭到淘汰。很多服務行業如保險、銀行及餐飲等，都需要提供無數不同的產品，滿足顧客不同的口味及需要。沒有人能夠預測未來，但當形勢轉變的時候，如同運動比賽一樣，團隊便要在團員之間及機構之內尋找獨有的無形資產，藉以跨越難關。而這些無形資產，正正是智力資本。這即是說，未來要獲得成功，取決於機構如何運用智力資本。

Why IC has to be managed?

IC holds the key to the future. The pace of change in business and elsewhere is relentless and has been accelerating. Manufacturers find their products can sell only for a few months and then become obsolete. Many in the service sector, insurance, banking and catering included, have to come up with a myriad of products to suit the different tastes and needs of their customers. Nobody can accurately predict the future, but when things have changed and the going gets rough, in business as in sports, the team needs to find something extra from within its people or organization to prevail. That something extra, invariably, comes from one's IC. This means that future success depends on how the IC components are deployed.



圖表二. 生產力局的智力資本模型
Figure 2. IC Model of HKPC

資料來源：修訂自 IC Statements in Europe (InCas)
Source: adapted from IC Statements in Europe (InCas)

生產力局的智力資本策略

IC Strategy of HKPC

生產力局的智力資本策略包括三大主要部分：第一、回應政府政策及不斷轉變的營商環境而制訂服務策略；第二、與「官產學研資」五方面建構完善而精密的合作網絡（這是生產力局一直致力建立的獨特網絡資本）；第三、給予員工發揮的空間（豐富本局的人力資本），並善用本局所發展出來的知識技能、業務流程及各種服務平台（結構資本），積極為業界提供服務。

回應政府政策及營商環境

香港經濟轉型，令業界對生產力局的服務需求出現根本轉變。為了與時並進，本局發展了一系列的服務，集中為高增值製造及服務業建立穩固的科技及人力資源基礎。透過積極參與工商業協會的活動及定期舉辦行業研討會，本局得以瞭解業界的需要。在支援政府政策方面，生產力局發揮本身在科技發展及應用的核心能力，與業界代表充分合作，建立各式支援服務平台；近年的例子包括CEPA業務發展、汽車零部件研發、清潔生產、數碼娛樂及開放源碼中心等。

業務網絡

生產力局與「官產學研資」五方面建立廣泛而緊密的網絡，令本局得以為業界及各界提供一站式支援服務。本局在近30個政府委員會及100個工商業協會內均派有代表。生產力局自1990年起透過有效及多層面的跨境溝通管道，於內地建立合作網絡。

The IC Strategy of HKPC has three main components, namely, the alignment of HKPC services with government policy and the forever-changing business environment; weaving a comprehensive and intricate network with each of the five strands of the quintuple helix of government, academia, industry, researchers and financiers (the unique relation capital that HKPC has fostered); and empowering the staff of HKPC in the proactive service of industry (enriching of its human capital), and the know-how, business processes, and various service platforms (the structural capital) that HKPC has developed.

Alignment with government policy and business environment

The restructure of the Hong Kong economy has resulted in some fundamental changes in the demand of HKPC services. HKPC responds to these changes by the development of a range of services focused on building the technology and human resources foundation for high value-added manufacturing and services. Industry needs are collected by the active involvement in trade and industry associations and regular industry cluster forums. In support of government policy, HKPC creates implementation platforms leveraging its core competence in technology development and applications and by collaboration with key stakeholders in industry. Examples of those platforms in recent years include CEPA, R&D of automotive parts, cleaner production, digital entertainment, open source centre etc.

Business Network

HKPC is well positioned to be in the front line of delivering one-stop services to all its stakeholders, as it has built an extensive and interleaving network with Government, Industry, Academia, Research Institutes and the Financiers. HKPC is represented in close to 30 Government Committees and 100 Trade Associations. HKPC has started building its network on the

在業界層面，本局與工商業協會及專業團體舉行大量研討會、會議、講座及展覽，並透過項目工作經常密切聯繫500多間企業。生產力局亦與學術及研究機構就行業升級、創新及科技商品化交流意念及合作；此外亦與多間主要銀行緊密聯繫，為業界提供融資的支援。

給予員工發揮的空間

生產力局致力招募及挽留表現出色的專業員工，並支持員工的持續發展。員工的知識、技術及經驗是本局的重要無形資產，對本局的未來發展舉足輕重。生產力局鼓勵員工構思新意念、發展新服務、掌握新技能、改善工作方法及建立新的業務聯繫；此外又設立獎勵機制，透過「最佳部門獎」、「工作改善小組」及「獎學金」等計劃來提升員工的生產力。本局又鼓勵員工在管理層午餐聚會 (Table for Ten) 及「總裁咖啡會」等渠道自由發表意見。

要員工人盡其才，大家必須擁有共同的價值。生產力局的中立角色，以公眾利益為本，並且以提升香港工商業國際競爭力為最終目標，皆是本局的重要工作方針。生產力局期望員工盡量分享其經驗，與內外伙伴緊密合作，善用本局獨有優勢，協助工商企業提升生產力。

mainland since the 1990s, with effective, cross-border communication channels on many levels. At the industry level, HKPC organized numerous seminars, conferences, forums and exhibitions jointly with trade and professional associations, and at any one time is in contact with more than 500 enterprises, either in project work or in various stages of pre-project discussions. HKPC also exchanges ideas and collaborates with academia and research institutes for industry upgrade, innovation and technology commercialization. HKPC also works with many of the major banks in providing funding support to industry.

People empowerment

HKPC recruits and retains good performing professional staff and supports their continual development. Their knowledge, skills, and experience are major intangible assets of HKPC and are crucial for its future success. Staff members are encouraged to come up with new ideas on new services, new capabilities to be captured, improved ways of doing things and new business contacts. Incentive schemes are introduced to boost productivity of staff through the programmes of “Best Division”, “Work Improvement Team” and “Scholarship Scheme”. Staff members are also encouraged to voice out their opinions, whether positive or negative, in gatherings with management, namely, “Table for Ten” and “Coffee with Executive Director”.

Empowerment demands a set of values shared by all. The impartial nature of HKPC, its public orientation and its ultimate target to improve international competitiveness of Hong Kong industry are some of its guiding principles. Staff members are also expected to share their experience and work in collaboration with other parties, both internal and external, in their pursuit to make the best use of the unrivalled advantage of HKPC in helping industry to enhance productivity.

自2000年至今的政府資助項目數目

Number of government-funded projects since 2000

資助種類 Types of Funding	數目 Number
創新及科技基金 Innovation and Technology Fund	135
中小企業發展支援基金 SME Development Fund	51
專業服務發展資助計劃 PSDAS	48
電影發展基金 Film Development Fund	5
設計智優計劃之設計支援計劃 Design Support Programme of DesignSmart Initiative	2

生產力局的智力資本 HKPC Intellectual Capital

人力資本

為履行使命，生產力局必須建立一支高質素團隊，具備專業技能、優秀學歷、豐富實務經驗，並能與香港、內地及海外公私營機構人士溝通合作。本局聘有超過200名專業員工（超過75%擁有碩士或博士學歷），平均15年工作經驗，而當中有10年是在本局服務。這些員工具備不同行業的知識，例如先進製造科技、資訊管理、環境科技及管理系統，兼具豐富的項目管理及培訓經驗。他們的專業技能及與業界所建立的廣泛網絡，協助本局成功推行超過220個政府資助項目，總額達4億多元。

Human Capital

In achieving its corporate mission, HKPC needs to build a team that is professionally competent, has good education with solid working experience and is able to communicate and work in collaboration with people at many levels, in both public and private sector, and in Hong Kong, PRD or overseas. HKPC employs over 200 professional staff (over 75% are master or doctor degree holders), with an average of 15 years of working experience of which 10 years are with HKPC. Staff members are knowledgeable in various fields such as advanced manufacturing technologies, information management, environmental management technologies and management systems. They are also experienced in project management and execution. Their professional competence and connection with industry helped HKPC secure over 220 government funded projects worth over \$400 million in total.



網絡資本

網絡資本是指生產力局在外界的資源。本局的網絡資本包括與內地及香港政府部門建立網絡、與多個行業的工商業協會及專業團體的聯繫，以及與不同行業建立緊密工作關係。本局在過去多年成功建立完善而廣泛的網絡。就以「升轉一站通」(TURN)計劃為例，本局便獲得100多個組織的支持，於12個月內在內地與香港舉行50多項活動。本局其中一個最有效擴大行業聯繫的方法，就是為行業商會提供秘書處服務。於2008年，生產力局為14個工商業協會及專業團體擔任秘書處。此外，本局亦擁有60,000多個客戶的資料庫。

Relational Capital

Relational Capital refers to resources that are external to HKPC. The relational capital of HKPC includes the network with both the Mainland and the HKSAR Government, the connection with trade and professional associations in various sectors, and the close working relationship with different industries. HKPC has established an excellent network over years. Taking the Transform, Upgrade and Relocate for a New Horizon Programme (TURN) as an example, HKPC is supported by more than 100 organizations to organize over 50 events (both in Hong Kong and on the Mainland) in 12 months. One of the most effective means for HKPC to extend its connection with industrial sectors is the provision of secretarial services to trade and professional associations. As of 2008, HKPC is the secretariat of 14 trade and professional associations. HKPC also has a client database of over 60,000.





結構資本

生產力局擁有多種結構資本。在科技層面，本局自2000年至今共註冊逾42項專利。而部分由本局所開發的科技更獲業界認可。在宏觀層面，生產力局的中立角色，有助本局創建及設計獨特的服務平台，以滿足業界的不同要求，例子包括「清潔生產伙伴計劃」、「升轉一站通」計劃、「優質旅遊服務」計劃（本局是該計劃的執行機構），以至汽車零部件測試及顧問服務。在營運層面，生產力局設立及管理28個卓越中心，設有實驗室及相關設施。本局亦匯集本身的經驗，出版了50本業界手冊，內容涵蓋不同的生產工藝。

Structural Capital

HKPC is in possession of many kinds of structural capital. At the technology level, HKPC has filed over 42 patents since the year 2000. Some technologies developed by HKPC were also recognized by the industry. At the macro level, the impartial nature of HKPC enables it to create and design unique service platforms meeting the different needs of industry. Examples of these platforms include Cleaner Production Partnership Programme, TURN, Quality Tourism Services Scheme (HKPC is the implementation agent of the Scheme) and Automotive Parts Testing and Consultant Service. At the operational level, HKPC operates 28 Centres of Excellence with associated laboratories and facilities. HKPC also codified its experience and published 50 handbooks on different aspects of production technologies.



突破性研發成果

Breakthrough R&D Results

部分自2003年起得獎的研發設備 Some Award Winning Equipment Developed since 2003

BM-COMBO膜生物污水處理系統
BM-COMBO Wastewater Treatment System

微型注塑技術
Micro Injection Moulding Machine

室內空氣消毒殺菌系統
Indoor Air Disinfection System

磁控濺射真空離子電鍍技術
Magnetron Sputtering Ion Plating System

電還原織染技術
Electrolytic Dyeing Reduction System

全電動注塑機
Fully Electric Injection Machine

超臨界CO₂無水染色系統
Super-Critical CO₂ Beam Dyeing System

等離子衣料處理技術
Plasma Treatment System

廠內鎂合金壓鑄廢料回收系統
In-house Die-casting Magnesium Scraps Recycling System

低溫離子電鍍設備
Low Temperature Ion Plating Machine

生產力局的主要業務流程 HKPC Key Processes

「一對眾」公共服務平台

生產力局作為以公帑支持的法定機構，有責任在宏觀經濟層面提升香港的生產力及國際競爭力。有鑑於此，本局的目標是透過「一對眾」(one-to-many)的公共服務平台形式，履行這使命。憑著在內地與香港的公、私營機構建立廣泛的網絡，生產力局無疑是建立及營運這些服務平台的理想機構。

在建立服務平台的過程中，生產力局會從內地與香港的政府部門、用家、服務供應商、學術機構及金融等領域引入相關伙伴。本局亦與海外服務供應商建立良好聯繫，透過服務平台從世界各地引進領先全球的業界典範。由於生產力局充份瞭解宏觀及微觀層面的事務，因此能夠確保所有伙伴合作無間、步伐一致。對於一些市場需求尚未成熟的新服務，本局亦會擔當「開荒牛」的角色，進一步發展及改善有關技術及方法。隨著有關服務成熟，並成功透過首批項目證實其效益，本局又會擔當推廣角色，協助其他服務供應商透過平台提供類似服務，令業內更多企業受惠。

一對一服務

除了「一對眾」公共服務平台之外，生產力局亦提供「一對一」的個別企業支援服務。第一，生產力局提供度身設計的顧問服務，協助企業改善生產力。第二，本局提供企業培訓，傳授行業知識及新知。第三，本局申請政府資助項目，藉此提升本身的創新

One-to-Many Service Platform

As a statutory organization in receipt of taxpayer money, HKPC has the obligation to raise the productivity of Hong Kong at the macro-economic level, thereby increasing its international competitiveness. HKPC aims to fulfil this part of its mission in the form of one-to-many service platforms. With its extensive network with both the public and private sector, and covering both Hong Kong and the PRD, HKPC is well positioned to construct and operate such service platforms.

In constructing a service platform, HKPC may bring in relevant parties from governments, users, service providers, academia and people from the financial sector in Hong Kong and the PRD. HKPC is also well connected with overseas service providers and may bring onto the platform world-leading practices from around the world. With good understanding of both macro and micro level issues, HKPC can help ensure all parties brought onto the platform to plan and work on the same wavelength. At the launch of the platform when the services are new to the community and the market demand is weak, HKPC may take the loss-leader position in developing and perfecting the technologies and methodologies. By the time the benefits of the services as offered by the platform are amply demonstrated by the first projects, HKPC may then take on a promotional role and assist other service providers to offer similar services via the platform to the benefit of many enterprises in the same sector.

One-on-One Service

Besides the one-to-many service platform, HKPC also provide one-on-one services. First, HKPC offers customized consultancy services to help enterprise improve their productivity. Second, HKPC provides corporate training to enterprises for industry knowledge transfer and update. Third, HKPC applies for Government funded projects, advanced its

設計及工程能力，促進機構持續發展。第四，本局支持本地工商業協會及專業團體設立不同獎項，藉此借鑑優質服務典範，及令香港企業的生產力成就獲得國際表揚。這些「一對一」的服務項目與服務平台相輔相成。本局從這些項目中所汲取的經驗，有助確保服務平台緊貼業界需要。

design and engineering capabilities on innovation for future success and sustainability. Last but not least, HKPC also supports local trade and professional associations in establishing award schemes to benchmark the quality of services, as well as the international recognition of productivity by Hong Kong enterprises. These one-on-one service projects complement the service platforms. The experience gained from these projects helps ensure that the service platforms will be relevant to industry.

世界級實驗室服務為檢測及產品開發工作提供強大支援

World class laboratory services supporting Testing and Product Development

先進製造科技 Advanced Manufacturing Technologies	物料分析 Materials Analysis
	鐘錶 Watches and Clocks
	醫療設備 Medical Devices
	眼鏡 Eyewear
	光學部件 Optical Components
	工業機械CE標誌認證支援 Machinery CE Certification Support
	納米產品標誌認證支援 Nano Mark Certification Support
	塗層質素 Coating Quality
	潛在失效模式分析 Failure Mode Analysis
	可靠性測試 Reliability Testing
環境管理科技 Environmental Management Technologies	電磁兼容 Electromagnetic Compatibility
	電子工藝 Electronic Process
	水質 Water Quality
	工業污水及廢水分析 Industrial & Waste Water Analysis
	空氣質素 Air Quality
	臭味測量 Odour Measurement
	沉積物及土壤分析 Sediment & Soil Analysis
	環境微生物化驗 Environmental Microbiological Examination
	食品安全 Food Safety
	中藥及化妝品污染分析 Chinese Medicine & Cosmetics Contamination
殘餘農藥及有機污染物分析 Pesticides & Organic Pollutants Analysis	
環保產品 Environmental Products	

對工商業的貢獻 Impact on the Industry

「香港和珠三角呼吸著同一空域下的空氣。要使香港成為綠色的大都會，區域合作至為重要。為進一步鼓勵粵港企業參與改善區內環境，我建議向立法會申請撥款九千三百萬元給香港生產力促進局，開展一項五年計劃，協助及鼓勵珠三角地區的港資工廠採用清潔生產技術及工序。企業透過這個計劃，一方面可以減少排放及提高能源效益，同時亦可提升競爭力及企業形象，配合內地產業結構升級的政策方針。」

摘自香港特別行政區行政長官
2007-08年施政報告

“The people of Hong Kong and the PRD region breathe the same air under the same sky. Regional co-operation is vital to develop Hong Kong into a green metropolis. To further encourage Hong Kong enterprises in Guangdong to play their part to improve the regional environment, I will ask the Legislative Council to approve funding of \$93 million for the Hong Kong Productivity Council to launch a five-year programme. This programme will assist and encourage Hong Kong-owned factories within the PRD region to adopt clean production technologies and processes. Under the programme, enterprises will be able to reduce emissions and enhance energy efficiency as well as improve competitiveness and corporate image. This initiative complements the Mainland's policy of industrial restructuring and upgrading.”

2007-08 Policy Address by the
Chief Executive of the HKSAR
Government.

以下個案說明生產力局多元化的智力資本，以及本局如何運用這些資本服務工商業。

例子：「清潔生產伙伴計劃」

支持政府

「清潔生產伙伴計劃」是一項環境保護署資助計劃，獲得廣東省經濟及貿易委員會，以及四個主要工商業協會的支持。生產力局是該計劃的執行機構，獲資助9,300萬元推出這個為期5年的計劃。在計劃之下，本局向位於珠三角地區的港資工廠推廣清潔生產技術及作業方式，目標在於支援工廠減排節能，為締造更美好的環境作出貢獻。



The following example serves to illustrate the diversity of IC of HKPC and how its IC is deployed in service of industry.

Example : Cleaner Production Partnership Programme (CPPP)

Working in support of Government

CPPP is a programme funded by the Environmental Protection Department (EPD) with the support of the Economic and Trade Commission of Guangdong Province (GDETC) and four major industry associations with HKPC as the implementation agent. A total of \$93 million was granted for HKPC to launch this five-year programme. Under the programme, HKPC takes up the role to promote cleaner production technologies and practices amongst Hong Kong-owned factories in the Pearl River Delta (PRD) region. The aim is to support factories to reduce emissions and therefore contribute to better environment.



支援工商業界

生產力局自1980年起便提供環境管理服務。今天，服務涵蓋多元化領域，包括清潔生產及環境創新，並且註冊了20多項專利。本局透過全資附屬公司生產力科技(控股)有限公司，將其註冊專利的科技向私營企業轉移及進行商品化。

過去多年來，生產力局向超過20個行業領域提供環境顧問項目服務，已累積大約500個環境工程設計的成功參考個案。本局從事環境領域的員工，全都擁有碩士或博士學歷，並且在提供環境管理相關服務方面擁有逾13年經驗（共超過1,000人年）。

A long history of service to industry

HKPC has been providing environmental management service since 1980. Since then, it has diversified its services into the areas of cleaner production and environmental innovation, and has filed more than 20 patent applications. HKPC has transferred and commercialized its patented technologies to the private sector in the form of licensing through its wholly owned subsidiary HKPC Technology (Holdings) Company Limited.

Over the years, HKPC has provided environmental consultancy projects to more than 20 sectors of industries. It has about 500 successful job references in environmental engineering design. HKPC staff members working in the environmental areas typically have master or doctor degrees and with more than 13 years of experience (over 1,000 man-year in total) in providing environmental management related services.

自2000年以來的科技(已申請專利)商品化及特許使用例子

Examples of Commercialized and Licensed Technologies (Patent filed) since 2000

AquaSed建築工地污水處理系統
AquaSed Wastewater Treatment System for Construction Site

先進小型廚餘垃圾就地轉化系統
Advanced Bio-technology Food Waste to Fertiliser Conversion System

廁所污水自動消毒系統
Toilet Waste Disinfection System

建築工地自動輪胎清洗機
Automatic Wheel Washing System for Construction Site

生產力局的環境管理服務 Environmental Management Services of HKPC

所服務的行業 Sectors of industries served	專長 Area of Expertise	擁有的資格 Qualifications in Possession
金屬加工及金屬產品 metal-working and metal products	室內及室外空氣質素改善 indoor and outdoor air quality improvement	香港實驗所認可計劃證可實驗室管理體系 HOKLAS accredited laboratory management system
電鍍及金屬表面處理 electroplating and metal finishing	環保產品及包裝設計 green product and packaging design	內地環境工程技術資格 PRC environmental engineering qualifications
印刷電路板印刷 printed circuit board printing	國際環保標準 international environmental standards	3位認可能源經理 3 Certified Energy Managers (CEMs)
化學及化學製品 chemicals and chemical products	ISO 14000環境管理體系 ISO 14000 environmental management system	20位中國內地註冊清潔生產審核師 20 PRC registered cleaner production auditors
紙張及紙品製造 paper and paper product manufacturing	OHSAS18001職業健康及安全 OHSAS18001 occupational health and safety	5位碳審計項目合資格服務提供者(建築物能源效益資助計劃) 5 qualified carbon auditors registered under the Buildings Energy Efficiency Scheme
印刷及出版 printing and publishing	環保績效認證 environmental performance certification	廣東省清潔生產技術依托單位 Guangdong Province registered cleaner production consulting company
電子 electronic	清潔生產 cleaner production	
醫療及保健 medical and healthcare	廢水處理 waste water treatment	
漂白及漂染 bleaching and dyeing	熱能回收 energy recovery	
傢俱 furniture	噪音控制 noise control	
電子產品 electronics	節能成效保證合約 energy saving performance contracts	
食物及飲料 food and beverage	碳審計 carbon audit	
汽車維修 automobile repair	廢物管理 waste management	
建造服務 building services		
養豬 pig farming		
玩具 toy		

與政府部門及 業界建立廣泛網絡

早於2006年，生產力局已獲選擔任環境保護署「清潔生產技術支援試驗項目」的顧問，為15間內地與香港的港資工廠進行清潔生產項目。同年，本局在香港與20個工商業協會舉行多個會議，確定珠三角地區不斷轉變的環境保護法規所帶來的影響。此舉亦在後來促成多個行業代表、生產力局及當時的香港特區政府環境運輸及工務局局長舉行會議，反映製造業的關注。

生產力局協助將製造商的關注與香港特區政府的「藍天」政策置於同一陣線，此舉有助理順不同方面的利益及將潛在的衝突轉化成雙贏局面，並促成「清潔生產伙伴計劃」的出現。

作為法定機構，生產力局與內地及香港政府部門、業界及服務供應商緊密合作。在「清潔生產伙伴計劃」之下，本局得到廣東省經濟及貿易委員會的支持，與珠三角地區9個市政府部門建立合作關係，它們分別是東莞、佛山、廣州、惠州、江門、深圳、肇慶、中山及珠海。

An extensive network with Government and industry

Back in 2006, HKPC was chosen as the consultant of the Environmental Protection Department's "Cleaner Production Technical Support Pilot Project", working with fifteen Hong Kong-owned factories on cleaner production projects in Hong Kong and the PRD. In the same year, HKPC convened meetings with 20 trade associations in Hong Kong to identify the impact of the changing environmental protection regulations in the PRD. This resulted in a meeting among industrial representatives, HKPC and the then Secretary for Environment, Transport and Works of the HKSAR Government to reflect the concerns of the manufacturers.

HKPC helped align the concerns of manufacturers with the "Blue Sky" policy of the HKSAR Government. This facilitated the diversified interests of parties and turned the potential conflict into a win-win situation which then gave rise to Cleaner Production Partnership Programme (CPPP).

As a statutory organization, HKPC works closely with governments, industries, service providers on both side of the border. Under CPPP, with the support of GDETC, HKPC has established working arrangements with the Economic and Trade Bureaux, the Environmental Protection Bureaux and other relevant authorities of the municipal governments of nine PRD cities including Dongguan, Foshan, Guangzhou, Huizhou, Jiangmen, Shenzhen, Zhaoqing, Zhongshan and Zhuhai.



清潔生產伙伴計劃的合作網絡

Collaboration network of Cleaner Production Partnership Programme

與香港特區政府建立的聯繫 Connection with the HKSAR Government	與工商業協會建立的聯繫 Connection with Trade Associations	廣東省市的合作聯繫 Connection with Guangdong Province & PRD cities
環境保護署 Environmental Protection Department 環境局 Environment Bureau 駐粵經濟貿易辦事處 Hong Kong Economic and Trade Office (Guangdong) 工業貿易署 Trade and Industry Department 創新科技署 Innovation and Technology Commission	香港鐘錶業總會 The Federation of Hong Kong Watch Trades & Industries Ltd. 香港電器製造業協會 Hong Kong Electrical Appliances Manufacturers Association 香港電子業商會 The Hong Kong Electronics Industries Association 香港玩具協會 Hong Kong Toys Council 香港鐘表工業協會 Hong Kong Watch and Clock Council 香港表廠商會有限公司 Hong Kong Watch Manufacturers Association 香港鞋業商會 Hong Kong Footwear Association 香港皮業商會有限公司 The Hong Kong Hide & Leather Traders' Association Ltd. 香港傢俬裝飾廠商總會 Hong Kong Furniture & Decoration Trade Association Ltd. 香港能源服務協會 Hong Kong Association of Energy Service Companies Ltd. 香港珠寶玉石廠商會 Hong Kong Jewellery and Jade Manufacturers Association 香港電鍍業商會有限公司 Hong Kong Electro-plating Merchants Association 香港印刷業商會 The Hong Kong Printers Association 香港紡織及成衣研發中心 The Hong Kong Research Institute of Textiles and Apparel	廣東省 Guangdong Province 鶴山 Heshan 東莞 Dongguan 珠海 Zhuhai 佛山 Foshan 廣州 Guangzhou 江門 Jiangmen 惠州 Huizhou 深圳 Shenzhen 肇慶 Zhaoqing 中山 Zhongshan

成果及進度

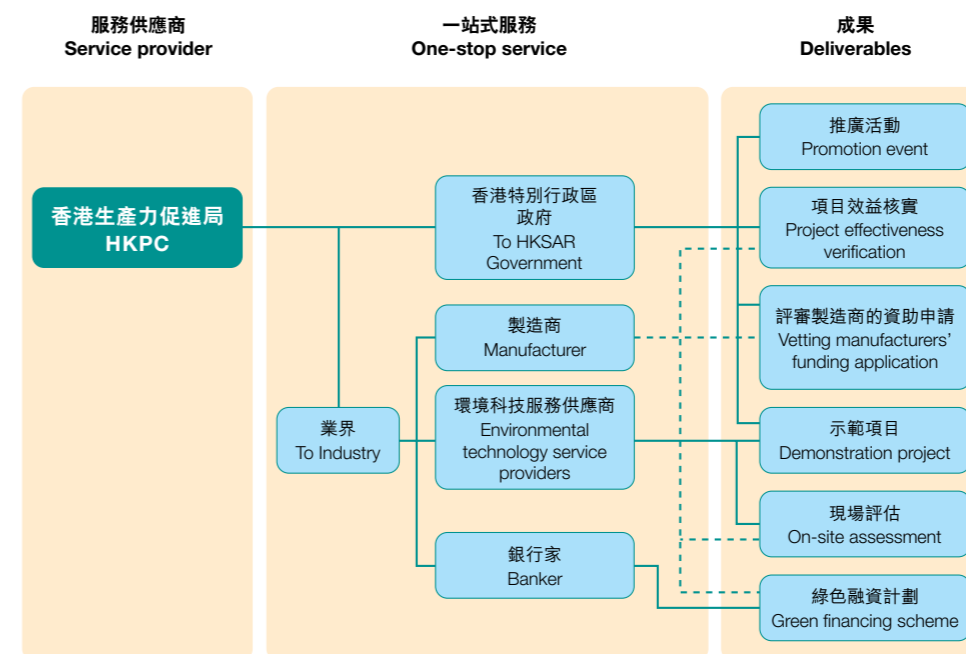
作為「清潔生產伙伴計劃」的執行機構，生產力局積極向各方面提供一站式服務。本局不但支持政府政策，而且負責所有計劃相關的活動，亦為廠商、粵港環境服務供應商及銀行提供合作平台，從而滿足各自的業務需要，藉此，本局協調及平衡了公、私營機構的利益。

在「清潔生產伙伴計劃」推出的12個月內，生產力局已舉辦了逾50場講座及培訓項目，覆蓋珠三角地區9個城市，目標在於提升清潔生產的認知及意識。本局亦組織了逾10個考察團，前往內地進行技術經驗及知識分享。本局的目標，是在5年內聯同160多家環境科技顧問及工程公司向大約1,000間參與計劃的公司提供即場評估服務，並核實清潔生產改善項目的效益。

Progress made

As the implementation agent of CPPP, HKPC plays an active role and endeavours to offer one-stop services to all parties. It supports the Government initiative and is in-charge of all project related activities. HKPC also provides platform for manufacturers, environmental technology service providers (companies located in both Hong Kong and the PRD), and bankers to identify and fulfil their business needs. It serves as an "interest moderator" among the public and private sectors.

In the first 12 months of the programme, HKPC has arranged over 50 seminars and training programmes, reached nine cities in the PRD region to raise awareness on cleaner production. It has also organized more than 10 study missions to the Mainland for technical experience and knowledge sharing. HKPC, in conjunction with over 160 environmental technology consultants and engineering firms, targets to provide on-site assessment services, as well as verification of the effectiveness of cleaner production improvement projects for about 1,000 participating companies in five years.



圖表三：生產力局在「清潔生產伙伴計劃」中的積極參與角色
Figure 3: The Active Role of HKPC

展望未來 HKPC in Future

生產力局的專業團隊、服務方針及業務網絡，能夠應付香港經濟未來所面對的挑戰。本局能夠善用內部及外界可用的多元化智力資本，發展嶄新的服務，滿足未來業界的各種需要。以下的例子說明，當業界提出需求，生產力局能夠協助香港提升長者服務質素，滿足大眾的期望。

例子：長者醫療及健康護理平台

香港人口不斷老化。據估計，到了2033年，長者人口比例將會由12.5%上升至27%。超過70%的長者都會患上一種或更多的長期病患，例如高血壓、關節痛、眼疾、糖尿病及老年癡呆症。由於資源所限，近年有很多長者須要輪候很長時間，以便接受適當的護理服務及支援。

若獲得適當資助，本局將可設立一個服務平台，透過應用創新科技、引入完善的管理體系及訂立優質護理服務標準，藉此提升及改善健康護理服務的效率和效益。這是香港首個同類型的服務平台，它能夠全方位支援業界升級。圖表四概覽了生產力局在推出這個服務平台所使用的資源。

這個服務平台利用了生產力局在製造技術、資訊科技及環境管理等多元領域的技術能力，再結合本局發展行業標準方面的經驗及專長。而作為法定公營機構，本局可以專注於促進工商行業的長遠發展，毋須考慮短期的盈虧。



HKPC, with its people, its way of doing things and its business network, is well positioned to meet the future challenges to the Hong Kong economy. Drawing upon its IC, HKPC is capable of coming up with new services to address different future needs, making use of in-house IC as well as external capabilities accessible to it. As an illustration, the following is an example of how HKPC could help Hong Kong to elevate its services to the elderly, should the need arise.

Example: Medical and Health Care Platform for Elderly

The Hong Kong population is aging. The proportion of elderly is increasing from 12.5% to 27% in 2033 (estimated). Over 70% elderly suffers from one or more chronic illnesses such as hypertension, arthritis, ophthalmology problems, diabetes, and dementia. Recently, there is a long queue for the elderly to get into appropriate care services and supports as the available resources are limited.

With funding support at the appropriate level, HKPC may establish a service platform to upgrade and improve the effectiveness and efficiency of the medical and health care services by maximizing the use of innovation technologies, embracing sound management systems, and adhesive to care-giving standards. This service platform will be the first of its kind in Hong Kong, 360-degree supporting industrial upgrade. Figure 4 is an overview of available resources at HKPC for delivering this service platform.

This service platform utilizes the wide-ranging technology competence of HKPC in manufacturing, information and environmental technologies, as well as its experience and expertise in developing industry standards. The statutory nature of HKPC plays an important role in ensuring the sustainability and long-term success of industry upgrade without being swayed by the short-term profitability considerations.

要素 Element	現有智力資本 Existing IC	即將掌握的智力資本 IC to be Captured
創新科技 Innovative Technologies	快速原型科技 Rapid-prototyping technologies 擴大廁所污水消毒系統的應用範圍 Adapt TWDS for wider application 病人監察系統 Patient monitoring system	為有認知障礙病人發展局域及廣域定位系統 Develop local and wide area positioning for patients with cognitive impairment 視像監控 Video surveillance 緊急警報系統 Emergency signalling system 遙距醫療警報系統 Remote medicine alert 減少感染機會的系統 System to reduce chance of infection
管理體系 Management Systems	資訊科技應用及整合 IT application and integration 改進及提升品質管理體系(例如：波多里奇模式及顧客關係管理模式) Streamline and upgrade quality management systems (e.g. Malcolm Baldrige Model and CSR Model)	開發長者護理服務模型 Develop elderly care services model
護理標準 Care-Giving Standards	將環境管理系統精簡化及升級 Streamline and upgrade environmental management systems 長者護理設施測試服務 Elderly care facilities testing services	卓越管理培訓課程 Training courses on management excellence 設立良好作業方法獎勵機制 Award scheme for good practices 對運作良好的設施設立品牌建立機制 Brand building mechanisms for well run facilities
業務聯繫及聯盟 Business Interface and Alliance	與現有客戶組建聯盟 Form an alliance with existing clients 運用政府資助 Use of government funding	收集長者護理服務需求的調查 Study to collect the elderly care service needs 與研發機構合作開發科技 Technology co-development with R&D institutes

圖表四：生產力局可用資源概覽
Figure 4: Overview of Available Resources at HKPC

智力資本摘要

Intellectual Capital Summary

資本類別 Capital	指標 Indicator		
人力資本 Human Capital	員工數目 Number of staff	總數 Total	562
		專業人員 Professional Staff	265
		輔助人員 Support Staff	297
	學歷 Academic qualification	學士學歷 With Bachelor Degree	359
		碩士學歷 With Master Degree	182
		博士學歷 With Doctorate	29
	工作年資 Working experience	5年以下 Less than 5 years	97
		5 – 10年 years	79
		10 – 15年 years	86
		15年以上 More than 15 years	300
	生產力局服務年資 Number of years with HKPC	5年以下 Less than 5 years	218
		5 – 10年 years	86
		10 – 15年 years	124
15年以上 More than 15 years		134	
女/男員工比例 Ratio of female/male staff		43:57	
網絡資本 Relational Capital	生產力局派有代表參與的 外間委員會數目 Number of external committees with HKPC representation	政府委員會 Government Committees	28
		商會 Trade Associations	96
		大學學系 University Departments	11
		獎項的評判團 Judging Panels of Awards	15
	參與外界委員會的員工數目 Number of staff sitting in external committees	政府委員會 Government Committees	12
		商會 Trade Associations	34
		大學學系 University Departments	7
	項目資助來源數目 Number of sources of project funding	政府部門 Government Departments	11
		私營企業 Private sector companies	2
	生產力局在珠江三角洲的辦事處數目 Number of HKPC offices in PRD		3
結構資本 Structural Capital	擁有的專利數目 Number of patents held		42
	行業服務平台數目 Number of industrial-wide service platforms		7
	以世界級標準/典範為基礎的服務數目 Number of services based on international standards/practices		22
	卓越中心數目 Number of Centres of Excellence		28
	實驗室數目 Number of testing laboratories		10