e-Transformation to a First World City

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The Singapore Success Story
**Singapore in the early 60s:**

- Overcrowded
- Poor Infrastructure
- High unemployment
- Limited industries
- Lack of Housing
- Slums / Unauthorized Buildings
- GDP per capita at U$427 for Year 1960

**Singapore Today...**

- Garden City
- Good Infrastructure
- Top Position in Ease of doing Business
  - 4 consecutive years
- High Foreign Investment
- High Employment Rate
- Good Quality of Life
- High Asset Enhancement
- GDP per capita of U$37,597 for Year 2008 (top 5 world ranking)
Investment Incentives  
High inflow

Social and labor stability

Infrastructure creation

Job creation

Land acquisition

Central Provident Fund  
High savings

Statutory Boards,  
GLCs as enablers

Public housing development

Political outcomes

How Singapore Did It?

- Well thought out Concept and Master Plans;
- Strong political leadership with mandate from citizens to enforce urban development plans;
- Constant Reform of physical development regulations since 1965. Leverage on IT since early 80’s to ensure better physical development control, enforcement, co-ordination and interaction between various agencies and departments, resulting in improved efficiency.
Importance of Physical Planning & Enforcement

- Balancing Environmental and Human needs in the pursuit of Economic Growth and Development Objectives

- Optimize the use of the country’s scarce land resources for the diverse/competing needs of both the current and future generations of residents, e.g.
  - Housing (for the poor / population growth)
  - Commerce
  - Industry
  - Transport (Road / Port / Airport ..etc)
  - Recreation
  - Defense

**New frontiers for e-Government & Healthcare**

**Singapore First Industrial Estate – Jurong Industrial Estate**

- Industrial Zone
- Ready Factory
- Import (Raw Materials)
- Export (Finish Goods)
- Infrastructure
  - Road (Heavy Vehicle)
  - Express Way
- Housing
  - Close proximity for workers
- Facilities
  - e.g. Schools/Post/Police/Recreation
Concept Plan
macro level blueprint to guide land usage to support future population and economic growth while maintaining a good work and live environment

Master Plan
translates the vision of the concept plan into detailed guidelines

Construction
Govern by Guidelines and Permits

Construction Permits required from Different Agencies at Different Stages of the Construction Process

- Farms and Agricultural Parks
- Building Control and Structural Safety
- Gas and Related Installations
- Military and Related Installations
- Electrical and Gas Installations
- Fire Safety and Civil Defence Shelters
- Public Housing and Amenities
- Telecommunication Installations
- Industrial Parks and Facilities
- Roads, Rails and Infrastructure
- Marine and Port Facilities
- Building Services and Pollution Control
- Public Greenery and Parks
- Drainage, Sewerage and Water Utilities
- Land Registration and Ownership
- Land Use and Urban Planning
Issues Faced .......

- Complex
  - Long Construction Cycle
  - Different Building Permits required at different construction stages
  - Different prove and requirements for different building permits

- Clarity and Accessibility on Submission Requirements
  - Repeated trips for re-submission

- Time Consuming and Inefficient
  - Physical filling of paper forms is tedious and prone to human error

- Costly
  - Paper and Labor Intensive

- Inconvenient
  - Different and Multiple physical trips to different agencies during Office Hours

- Lack Visibility of Overall Project Status
  - Applicant not able to have up-to-date approval

- Longer Processing Time
  - Unable to perform parallel processing
  - Agencies are not able to better co-ordinate

Introduction of CORENET

CORENET (Construction and Real Estate Network)

- Flagship programme for construction sector under Singapore’s IT2000 Master Plan

- Aims to reengineer and streamline the fragmented work processes in the Construction Industry, to achieve a quantum leap in Quality, Productivity and Turnaround time.
Implementations
- CORENET e-Submission System

- Awarded in Jun 2000 & Launched in Nov 2001

- Scope of Services
  - Business Re-Engineering Consultancy
  - Industry Wide (Private & Government)
  - Total Project Design & Deployment
  - Training
    - Agency Training
    - On-going Industry Training
  - Industry Promotion Support
    - Road Show
  - HelpDesk
  - 24 x7 Support
    - Maintenance & Operation Services
  - Disaster Recovery Service

CORENET Participating Professional Bodies / Associations

- Singapore Institute of Architects (SIA)
- Singapore Institute of Surveyors and Valuers (SISV)
- Singapore Contractors Association Ltd (SCAL)
- Real Estate Developers’ Association of Singapore (REDAS)
- Institute of Engineers, Singapore (IES)
- Association of Consulting Engineers, Singapore (ACES)
CORENET Participating Agencies

- Farms and Agricultural Parks
- Building Control and Structural Safety
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CORENET - Many Agencies One Government

Qualified Persons
(architects, engineers, contractors, developers etc)

- Online Submission
- Offline Submission
- Online Enquiry
- Online Correspondence

CORENET e-Submission Framework
Urban Redevelopment Authority (URA)
- Physical Planning and Development Control System

**Development Planning Module**
- allows capturing and maintenance of both Spatial and Textual Data,
- supports business functions such as Master Plan, Urban Design Guides, Lot Boundaries and related planning activities

**Development Control Module**
- facilitates the approval process for all development related applications (such as application for Layout Approval, Pre-Computation Plan Approval, Erection of Building Approval, Landscape Approval, etc) in compliance with legislation relating to the Control of Land Use & Development

Building and Construction Authority
- Building Control (Integrated Submission and Processing System)

**Building Control Module**
- Supports BCA Officers in their daily processing and tracking of construction progress within their area of jurisdiction
- Provides guided processing functions for all relevant Building Control application types e.g.
  - Building & Structural Plan Approval,
  - Building Permit,
  - Registration of Engineers/Clerks of Work,
  - Temporary Occupation Permit
  - Certificate of Completion
- Tracks building construction process
- Tracks building health
  - Periodic Inspection
  - Enforcement
ePlanCheck – Automatic Plan Checking

Click on the Icon to generate report

New frontiers for e-Government & Healthcare

BEST BOOT FORWARD...
Online approval = $160 million annual savings

MADCAP contractor Poh Choo Kang should be happy. He can now get building permits and planning approval all under one roof — his own — at the click of a mouse.

Yes, builders need no longer go around government offices to start a project. From today, some 900 consultancy firms can apply online for all types of building plans simultaneously to 12 different government agencies.

They can submit building plans and apply for building permits and certificates through the Construction and Real Estate Network (Curenet).

So says Mr Mel Rox Tax, Minister for National Development, in a speech he is to give this morning at the opening ceremony of Curenet Asia.

The Building and Construction Authority (BCA) estimates this will help the construction industry save about $160 million a year.

To help, various government agencies will set up computer terminals at their premises.

But companies can acquire the necessary hardware and software themselves. BCA and the Singapore Productivity and Standards Board have packaged a financial assistance scheme to help them do so.

However, this scheme will be available only to the first 400 applicants.

BCA will also offer subsidised training on the new system.

Two other electronic systems are being launched today. The Construction Information System will carry information about building codes, regulations and standards from different agencies.

And the Electronic Building Design Appraisal System will enable users to calculate whether a building plan complies with official regulations.
S’pore still tops for business

It retains No 1 World Bank ranking for third year, thanks to key reforms

By Henry Chan

It’s a hard-fought battle for the third year running. Singapore has retained its world No 1 place in business friendliness as ranked by the World Bank. A tough job, given the world’s major economies are all competing to attract investment.

Spore, with its strong economic fundamentals, a skilled workforce and an efficient regulatory structure, has retained its status as the world’s most business-friendly nation, according to the World Bank’s Doing Business report.

World Bank ranking for Ease of Doing Business

2009 - Reduces building permit processing time from 102 days to 38 days

2010 – Reduces building permit processing time from 38 to 25 days

CORENET helps Spore to retain World No. 1

World Bank ranking for Ease of Doing Business

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CORENET – Platform for growth & continuous reform

- Alignment / Standardization
- More Agencies
  - Launch (Yr 2001) 12 participating Agencies
  - Present (Yr 2009) 16 participating Agencies
- Streamlining of Business Processes
  - Launch (Yr 2001) 700+ Applications Forms to 500+
  - Present (Yr 2008) 231 Application Forms
- Continuous Improvement
  - Launch (Yr 2001) 30% improvement in turnaround time
  - Yr 2009 (World Bank Report) - from 102 days to 38 days
  - Yr 2010 (World Bank Report) - from 38 days to 25 days
**Putrajaya Authority, Malaysia**

Putrajaya is built with an aim to be:
- The new Administrative Centre
  - housing all Federal Administrative Authorities
  - with commercial and residential properties
- the state-of-the-art Intelligent Garden City
- a key tourist destination for Malaysia

To fulfill the vision, NOVA provided:
- IT Master Plan
- Integrated City Management System (SUMBER-PUTRA)
  - e-Submission System
  - e-Guideline
  - Council Management System
    - Development Planning
    - Development Control
    - Building Control
    - Property Register & Valuation
    - License Management

**From 4,581 hectares of Oil Palm Plantation to an Intelligent Garden City**

**Putrajaya - Improvement**

<table>
<thead>
<tr>
<th>Application Type</th>
<th>Duration</th>
<th>After Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layout (PP)</td>
<td>12 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Pre-comp (PP)</td>
<td>6 weeks</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Erection Of Building (PP)</td>
<td>8 weeks</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Earthwork (BC)</td>
<td>4 weeks</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Building Plan (BC)</td>
<td>12 weeks</td>
<td>6 weeks</td>
</tr>
<tr>
<td>Road &amp; Drainage (BC)</td>
<td>4 weeks</td>
<td>2 weeks</td>
</tr>
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Ready-to-deploy eGovernment Framework

Our Reference Sites

City Management
Singapore e-Government Initiative
• CORENET e-Submission System
• Automated Plan Checking System
• e-National Productivity & Quality Specification
Singapore Building and Construction Authority
• Building Control Management System
Singapore Urban Redevelopment Authority
• Integrated Land Use System
• Car Park Administration System
Singapore JTC Corporation
• Industrial Land Plan Endorsement & Approval
Malaysia Putrajaya City Council
• IT Master Plan
• Integrated City Management System
Malaysia Selangor State
• IT Master Plan
• Land Alienation System
Malaysia Kota Kinabalu
• Property Valuation System
Indonesia Bakosurtanal
• Land Resource Evaluation Consultancy (ADB funded)

Social Welfare
Singapore Ministry of Community Development, Youth and Sports
• Integrated Social Welfare Case Management System
Singapore Legal Aid Bureau
• Legal Aid Management System

Land Transport
Singapore Land Transport Authority
• Vehicle Type Approval and Inspection System
• Mobile Enforcement System
Brunei Land Transport Department
• National Land Transport Management System, covering
• Vehicle Registration & Vehicle Licensing
• Driver License ...etc

Judiciary
Singapore Attorney-General’s Chambers
• Electronic Litigation Management System
• Legislation Editing and Authentic Publishing System

Health
Singapore National Skin Centre
• Singapore 1st Paperless Hospital Management System
Hong Kong Federation of Trade Union Clinic Chain
• Centralized e-Patient Record and Clinic Management
Indonesia Rumah Sakit Pondok Indah
• Centralized Hospital Management (for 2 hospitals)
THANK YOU

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