



**Asia-Pacific  
Economic Cooperation**

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**2012/SOM1/EC/WKSP/019**

Session 7

## **Dealing with Construction Permits**

Submitted by: novaCITYNETS



**APEC Ease of Doing Business 2012  
Stocktake Workshop  
Moscow, Russia  
12-13 February 2012**





Asia-Pacific  
Economic Cooperation






## APEC Ease of Doing Business 2012


### DEALING WITH CONSTRUCTION PERMITS

Stocktake Workshop  
Feb 12-13, 2012  
World Trade Centre  
Moscow Russia


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## Dealing with Construction Permits

- Part of the World Bank's "Doing Business" survey.
- Records procedural requirements for a business in the construction industry to build a standardized warehouse.

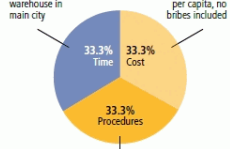
TABLE A.1 What do the dealing with construction permits indicators measure?
<b>Procedures to legally build a warehouse (number)</b>
Submitting all relevant documents and obtaining all necessary clearances, licenses, permits and certificates
Completing all required notifications and receiving all necessary inspections
Obtaining utility connections for water, sewerage and a fixed telephone line
Registering the warehouse after its completion (if required for use as collateral or for transfer of the warehouse)
<b>Time required to complete each procedure (calendar days)</b>
Does not include time spent gathering information
Each procedure starts on a separate day
Procedure completed once final document is received
No prior contact with officials
<b>Cost required to complete each procedure (% of income per capita)</b>
Official costs only, no bribes

**Ranking based on 3 indicators**

**Time:** Days to build a warehouse in main city  
**Cost:** As % of income per capita, excluding bribes  
**Procedures:** Regulatory submissions, obtaining of construction permits, receiving inspections and utility connections

**FIGURE A.1** Dealing with construction permits: building a warehouse

Rankings are based on 3 indicators




Days to build a warehouse in main city

As % of income per capita, no bribes included

Procedure is completed when final document is received, construction permits, inspections and utility connections included

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## Dealing with Construction Permits

- Time and procedures in construction permitting is the biggest “regulatory impediment” to doing business. (EODB survey in 2009)
- Ease of Doing Business Phase 2 Dealing with Construction Permits (DCP) Diagnostic Study:
  - Peru - March 26 to 30, 2012
  - Thailand - May 28 to June 1, 2012
  - Indonesia - August 6 to 10, 2012
- Singapore Team (IE Singapore and novaCITYNETS) to:
  - Liaise with Government of Peru to set a schedule of meetings in Lima to interview key stakeholders (regulatory departments and industry players) to understand current regulatory and business environment relating to DCP, key constraints and areas of improvement.
  - Develop diagnostic report to help the Government of Peru identify opportunities for reform and/or transformation, assess and advise expected costs and benefits of exploiting such opportunities.

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## Dealing with Construction Permits Indicators

### Key Metrics: Peru and Singapore

Peru's Dealing with Construction Permits Indicators					Singapore's Dealing with Construction Permits Indicators				
Year	Peru's DCP Rank	Procedures (number)	Time (days)	Cost (% of income per capita)	Year	Singapore's DCP Rank	Procedures (number)	Time (days)	Cost (% of income per capita)
2006	--	16	208	133.6	2006	--	11	102	23.1
2007	--	16	208	124.6	2007	--	11	102	21.1
2008	--	16	208	112.7	2008	--	11	102	22.9
2009	--	16	208	95.4	2009	--	11	38	21.2
2010	--	16	203	88.8	2010	--	11	33	19.9
2011	96	16	188	87.5	2011	3	11	26	19.7
2012	101	16	188	76.3	2012	3	11	26	18.1

Singapore - Peru Indicator Differential				
Year	DCP Rank	Procedures $\{[(P-S)/S \times 100]\}$	Time $\{[(P-S)/S \times 100]\}$	Cost $\{[(P-S)/S \times 100]\}$
2006	--	45.5	103.9	478.4
2007	--	45.5	103.9	490.5
2008	--	45.5	103.9	392.1
2009	--	45.5	447.4	350.0
2010	--	45.5	515.2	346.2
2011	3100.0	45.5	623.1	344.2
2012	3266.7	45.5	623.1	321.5

Administrative Reforms

CORENET Quantum Leap

Continuous Streamlining

Transformation and reforms to target “Time” and “Cost”, not Procedures which are determined more by Government structure and legal/regulatory frameworks.

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## Dealing with Construction Permits Indicators

### Procedures: Peru and Singapore

No	Procedure	Time (days)	Cost (PEN)
1	Obtain Property Ownership Certificate	2	15
2	Obtain Land Development & Building Parameter Certificate	15	213
3	Obtain project authorization certificate from Prof Assn of Engineers	1	320
4	Submit Prelim Design for Consultation to the Municipality	10	1,466
5	Obtain Construction License from the Municipality	45	3,909
6	Receive 1st of min of 3 inspections during construction	1	977
7	Receive 2nd of min of 3 inspections during construction	1	--
8	Receive 3rd of min of 3 inspections during construction	1	--
9	Request water supply servid		
10	Receive inspection from wat		
11	Request potable water ser		
12	Request & obtain telepho		
13	Notify project completio		
14	Obtain construction parki		
15	Obtain Factory Statemen		

Activity time (Gov): 197 days  
 Total time (Public): 188 days  
 Leverage: 9 days (4.6%)  
 Time = Money  
 Real Cost to Business > PEN10,770

No	Procedure	Time (days)	Cost (SGD)
1	Obtain written planning permission (EDA/CORENET)	14	2,868
2	Obtain structural plan approval & building commencement permit (CORENET)	14	3,900
3	Obtain technical clearances for fire safety, sewerage/drainage/sanitary works, pollution control, environmental health, road plans, parking facility (CORENET)	10	1,950
4	Technical consultation environmental building plan matters (CORENET)	1	--
5	Technical consultation on car parking proposal (CORENET)	1	130
6	Obtain building plan approval (CORENET)	10	--
7	Online declaration of risk management implementation for workplace safety & health	1	--
8	Obtain water and sewerage connection (CORENET)	7	1,400
9	Obtain phone connection from privatised telco provider	1	60
10	Receive final inspection for fire system and completed building (CORENET)	1	--
11	Obtain certificate of statutory completion (CORENET)	10	--
Total (Nett)		26	10,308
Cost as % of Income Per Capita			18.1

Activity time (Gov): 70 days    Total time (Public): 26 days    Leverage: 44 days (62.9%)

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Concurrent  
Simultaneous

## Singapore: 1950s to 2010s

- Overcrowded
- Poor Infrastructure
- High unemployment
- Limited industries
- Lack of Housing
- Slums
- Unauthorized Buildings




2010s




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## Singapore Today...



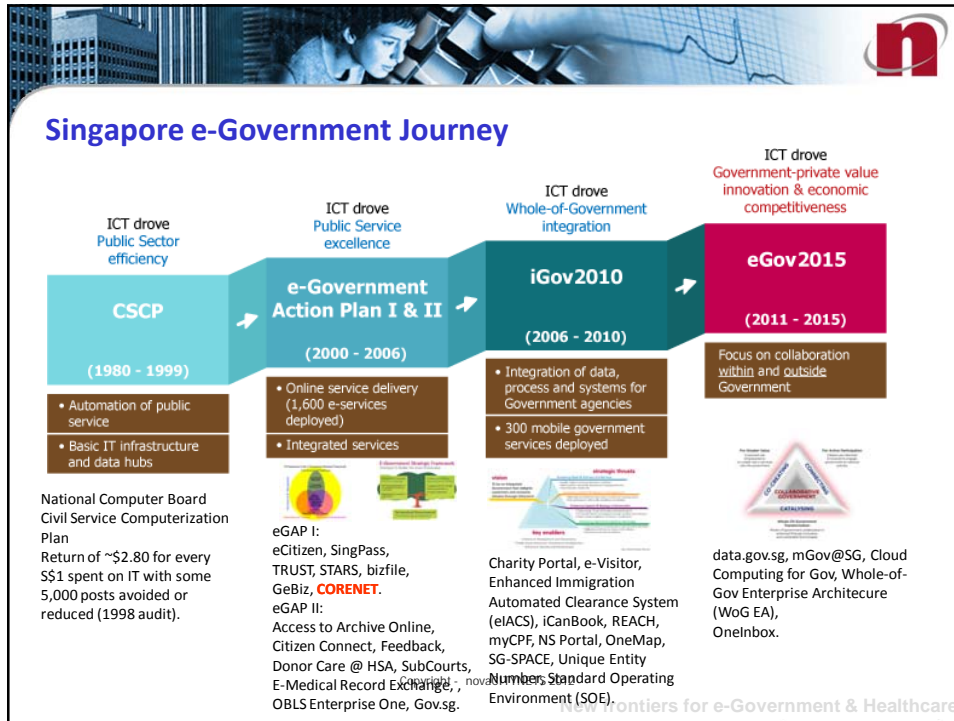
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## The Singapore Approach ...

- Well thought-out Concept and Master Plans;
- Strong political leadership with citizens' mandate to enforce development plans;
- Constant reform of physical development regulations since 1965 and aggressive use of Information Technology since early 80's to ensure better physical development control and enforcement;
- Better co-ordination and interaction between various agencies and departments resulting in improved efficiency .

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## Transforming Singapore Real Estate & Construction Industry



**CO**nstruction and **RE**al **E**state **NET**work

[www.corenet.gov.sg](http://www.corenet.gov.sg)

- Aims to leverage on IT to re-engineer the fragmented business processes of the real estate and construction industry to achieve a quantum leap in productivity, quality and turnaround time.
- Champion: Ministry of National Development
- Lead Agency: Building & Construction Authority

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**Target: Annual Savings of S\$160 million**

Page 10 **SINGAPORE** THE NEW PAPER/Tuesday, November 20, 2001

# BEST BOOT FORWARD...

Online approval = \$160 million annual savings



**WHAT'S NEW?**

- **Construction and Real Estate Network** — to submit plans and apply for permits and certificates
- **Construction Information System** — details about building codes, regulations and standards
- **Electronic Buildable Design Appraisal System** — to check if a building plan complies with official regulations

**M** ADCAP contractor Phus Chu 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 (Corenet).

So says Mr Mah Bow Tan, Minister for National Development, in a speech he is to give this morning at the opening ceremony of BauCON 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 on 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 Buildable Design Appraisal System will enable users to calculate whether a building plan complies with official regulations.

Developed at a cost of just over \$5 million, these three systems should help raise productivity in the construction industry.

The construction industry is no longer just a brick and mortar business.

Already 72 firms involved in 31 projects are using the Internet for project collaboration through Project Website, a private-sector online system.

There's also an electronic procurement project started by local contractors. Started in May this year, it has 55 companies trying out the new online method of procurement of services.

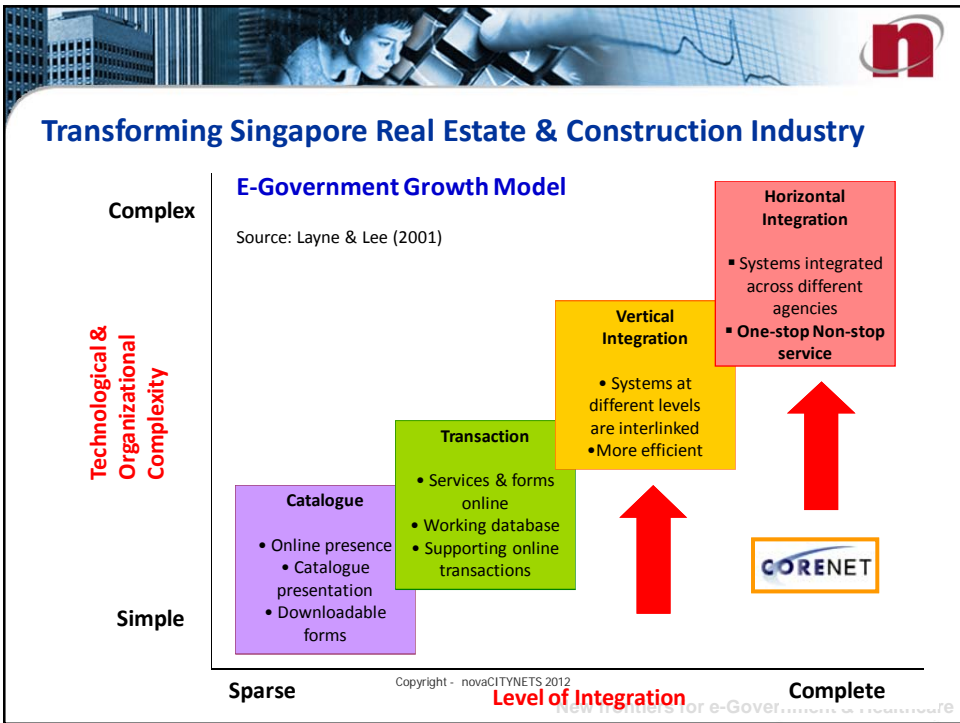



**HELP AT A CLICK:** Mr Mah Bow Tan, Minister for National Development, has good news for contractors.

**Achieved in end-2007.**

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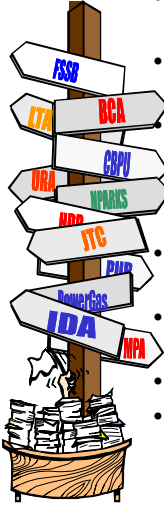
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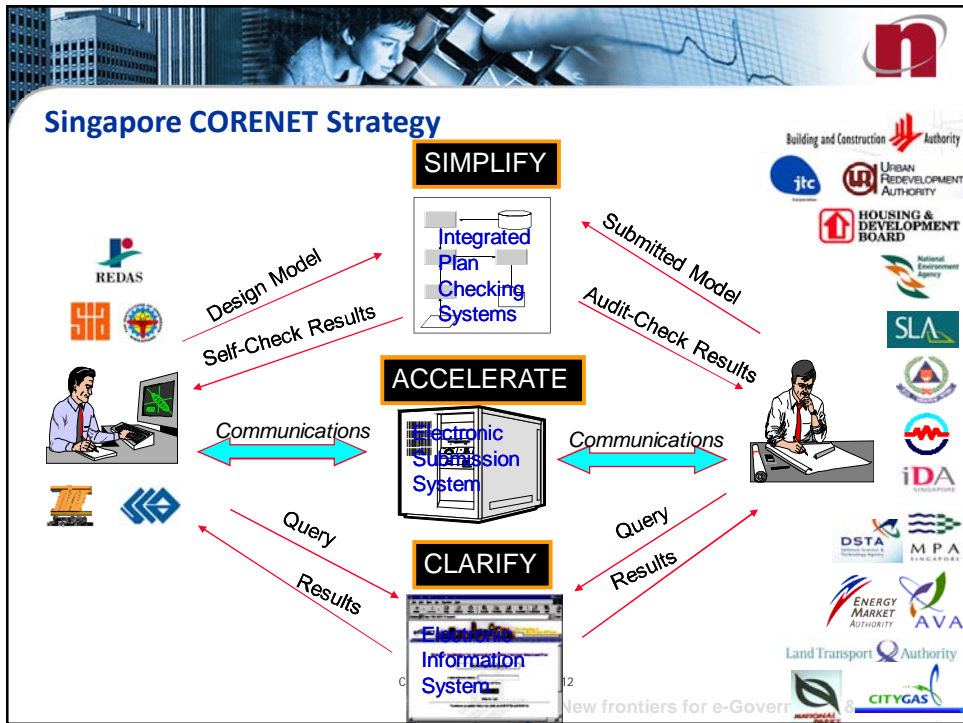


## The Singapore Challenge


- 16 Government Agencies, 209 application types, 845 different forms.
- Over-emphasis on administrative procedures instead of professional practice.
- Paper-based dispatch, processing, checking, approving and filing of application forms and building plans using bound manuals.
- Limited visibility on approval or disapproval of upstream and inter-dependent applications.
- Evolving Acts, Regulations, Codes & Guidelines with potentially conflicting requirements.
- Laborious manual checking of plans using slide rule and measuring instruments and physical checklists.
- Interpretation of Code may vary from officer to officer.
- No centralized source or repository of Codes, bye-laws, technical requirements, risk using outdated references.



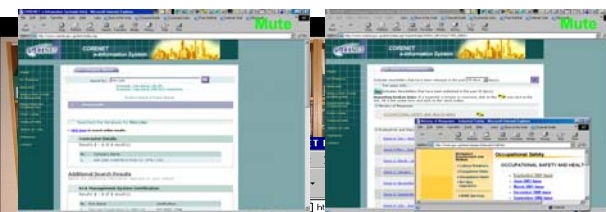
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## CORENET Electronic Information Service




Situation without e-Information System

What from this "Library"?

To Information at figure tips

- Agency: BCA  
Current Edition: 1995 [View more](#)
- Chapter 1 SCOPE AND DEFINITIONS
  - Chapter 3 GENERAL REQUIREMENTS
  - Chapter 5 LIFT
  - Chapter 8 TAXI STAND
  - Chapter 9 CAR PARK
- 2. STANDARD CHECKLIST FOR SUBMISSION OF BUILDING PLANS  
Agency: BCA  
Current Edition: Version 1.0 - 1999 [View more](#)
- Standard Requirements
- 3. TOP INSPECTION CHECKLIST FOR RESIDENTIAL DEVELOPMENT



## CORENET Electronic Information Service

Agency Name (15)	Document Type
AGC	Acts & Statutes
BCA	Codes, Guidelines, Handbooks, FAQ
HDB	Guidelines, Handbooks
IDA	Codes, Guidelines
JTC	Handbook
LTA	Codes, Guidelines, Handbooks
MOM	Guidelines, Handbooks
NEA	Codes, Guidelines
NParks	Guidelines, Handbooks
PUB	Codes, Guidelines, Handbooks
SPRING	CP & SS
URA	Codes, Guidelines, Handbooks
CityGas Ltd	Handbooks
PowerGrid Ltd	Handbooks
Power Supply Ltd	Handbooks

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## CORENET Electronic Submission Service

**A virtual one-stop round the clock 'counter' to facilitate:**

- One-stop non-stop to 16+ Gov Orgs
- Moving from Days to mere Minutes
- Forms reduced 73% from 845 to 231 today
- Online enquiry on application status
- Automated Checks
- Tracked Clarifications & Audit Trails
- Inter-Agency Collaboration
- Faster Processing and Turnaround

**Regulatory Agencies**

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## CORENET Electronic Submission Service

**Rate of Industry Adoption (Source: Building and Construction Authority)**

**e-Submission Transactions**

Quantity

Year


Oct-03   Jan-04   Apr-04   Jul-04   Aug-04

made mandatory by July (%)

types (%)

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From <7,000 in 2002 to almost 500,000 (>99%) in 2010. Tipping point in mid-2003.



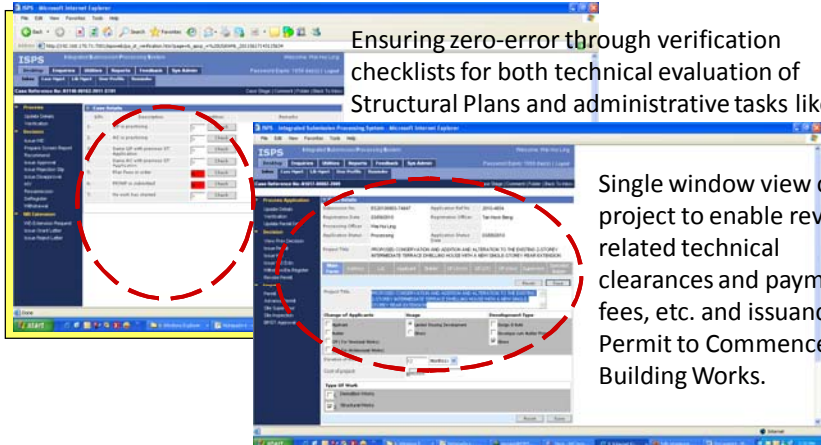
## CORENET Electronic Submission Service

### Enabling Online Application Processing & Approval


#### Building Control Process Integration

Ensuring zero-error through verification checklists for both technical evaluation of Structural Plans and administrative tasks like

Single window view of project to enable review of related technical clearances and payment of fees, etc. and issuance of Permit to Commence Building Works.



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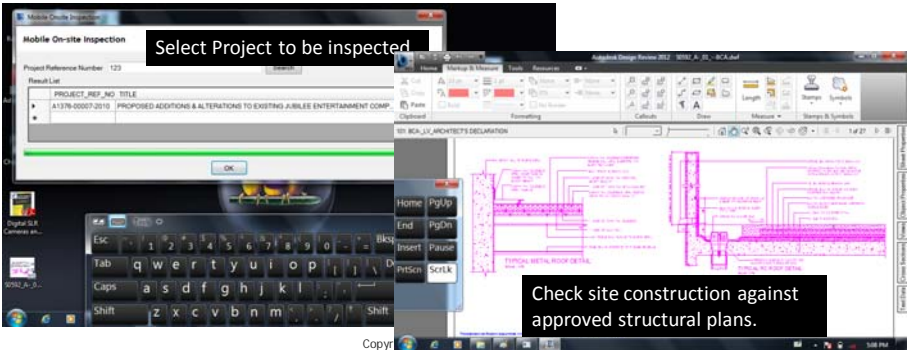


## CORENET Electronic Submission Service

### Enabling Online Application Processing & Approval


#### Mobile Site Inspection Workflow Integration

Officers can use tablet-based mobile devices to inspect construction sites without the need for paper drawings or having to take notes and updating the System over the Internet thereafter. Everything can be performed on-the-fly!



Check site construction against approved structural plans.

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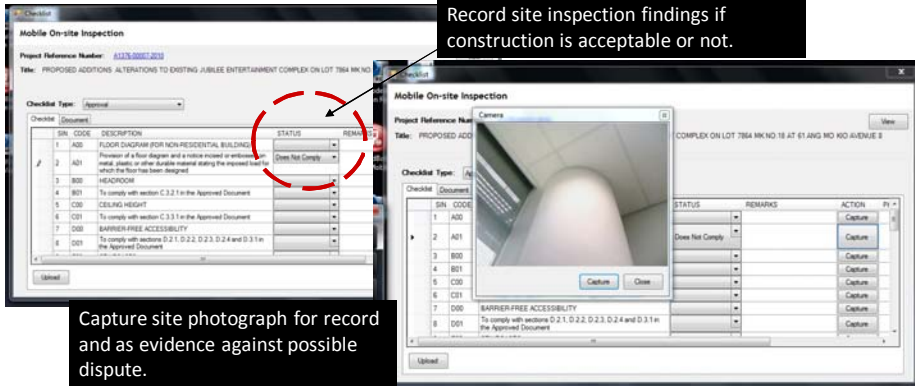


## CORENET Electronic Submission Service

### Enabling Online Application Processing & Approval

#### Mobile Site Inspection Workflow Integration


Site findings & annotated evidences are captured via mobile devices and can be synced remotely back to the System anytime and anywhere.



Record site inspection findings if construction is acceptable or not.

Capture site photograph for record and as evidence against possible dispute.

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## CORENET Electronic Submission & Online Application Approval

Reduced the time it takes from the point of application to the desktop of an Authority's engineering officer from **1-2 days to 10-30 minutes**.

System comprised of 16 modules regulating:

- **construction**, viz. building & structural plan approval, permit to commence building works, CD shelters, quarterly structural reporting, certified as-built plans, temporary occupation & statutory completion;
- **registration of professionals** like resident engineers & clerks-of-works
- **post-construction**, viz. lift maintenance, periodic inspections, strata title, share-value and MCST;
- **others** like statutory enforcement, illegal structures & advertisement licensing.


**BCA integrates submission processing electronically**

Integrated Submission Processing System at BCA supports BCA's building control functions such as the issue of structural and building plans, the issuance of Temporary Occupation Permits and Certificates of Statutory Completion and the retrieval of building information and plans. Building control functions within BCA would be able to retrieve vital information.

The system went live in April 2005 with a seamless interface to the CORENET e-Submission System. As a result, delivery of building control functions was shortened by a day.


The new system resulted in a 50% reduction in system maintenance cost, compared to the old system.

Source: BCA Annual Report 2005




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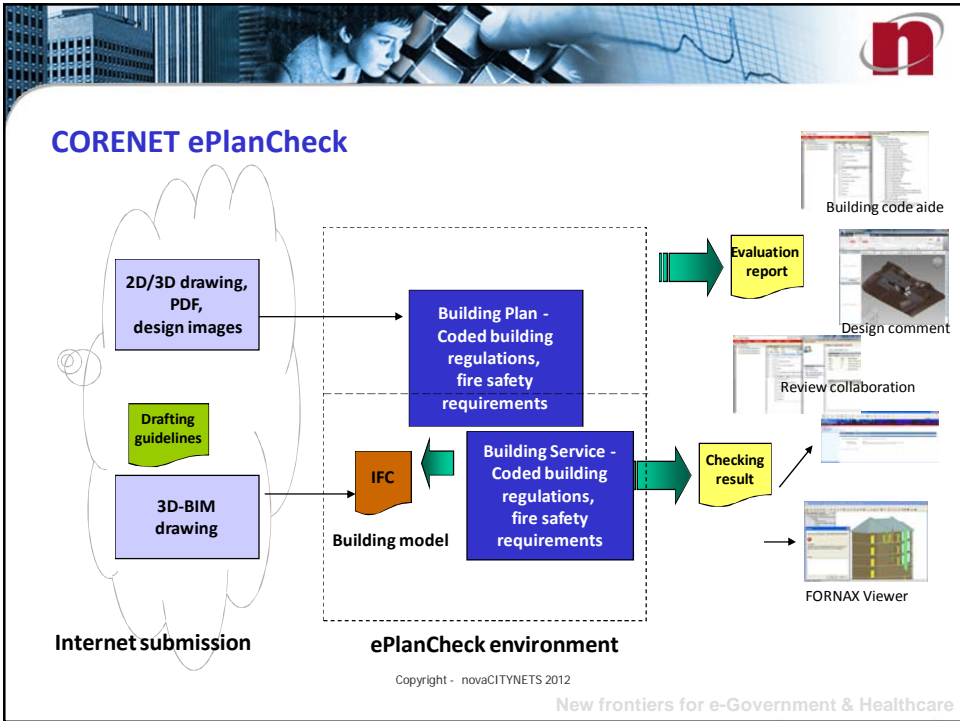




## CORENET Electronic Plan Checking System (ePlanCheck)

- Formerly called Integrated Plan Checking Systems, CORENET ePlanCheck is an artificial intelligence (AI) system that automatically checks electronic plans for compliance to Singapore building regulatory requirements.
- Participating Regulatory Authorities include:
  - Building and Construction Authority,
  - Power Gas.
  - Fire Safety & Shelters Department,
  - Housing and Development Board,
  - Land Transport Authority,
  - National Environment Agency,
  - Public Utilities Board,
- Launched in 2011, trained officers now leverage on this expert tool to enhance the building plan checking and approval process whilst providing feedback for its continuing improvement.



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## CORENET ePlanCheck

Building Control, e.g.

- Building Control Regulations (BCR)
  - Protection from falling with railing or parapet wall
  - Handrail requirements
  - Requirements for staircase and ramp dimensions and constructions
  - Requirements for natural lighting and ventilation
  - Provision for lift
  - Energy conservation calculation by building envelope
- Barrier Free Access (BFA)
  - Accessibility through lift
  - Accessibility through ramp
  - Accessible route
  - Handicap WC: dimension, manoeuvring space
  - Clearway for handicap access

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## CORENET ePlanCheck

Fire Safety, e.g.





- General Requirements
  - Minimum dimensions for Fire fighting lobby, Smoke stop lobby, etc.
- Means of Escape
  - Travel distance requirements
  - Exit requirements
  - Fire resistance for staircase, passageway
  - Smoke free approach
  - Specific requirements for hospital, hotels, dormitories, halls, places of assembly
- Structural Fire Precautions
  - Compartment dimensions like floor area, cubicle extent, height, etc.
  - Separation of purpose groups, halls, kitchen, workshop/factory, high-risk rooms, residential
  - Protection from vertical fire spread
  - Fire resistance requirements
  - Ventilation requirements

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## CORENET ePlanCheck

-  Civil Defence Shelters, e.g.
  - Technical Requirements
    - Shelter dimensions
    - Setback distance
    - HS & NS tower
    - HS under staircase
    - Ventilation requirements
-  Land Transport, e.g.
  - Car Park Requirements
    - Dimensions of car park stall, parking aisle, clear width of parking ramp, access way
-  Public Housing, e.g.
  - Housing Development
    - Lift provision for car park, handicapped access to car park, window height, linkway, staircase railing
-  Environmental Health, e.g.
  - Building Plan Requirements
    - Requirements for refuse facilities
    - Requirements for public toilet, market stall and food stall

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## CORENET ePlanCheck


Web-based application

Welcome to the Integrated Building Plan and Building Services Checking System

Login ID:   
 Password:  Login

Task/Item	Action required	File Ref. No./Title	Task Date	Expected Response Date	From
Task (3)	To view approval by client	NOVA/STRICTEN/09/111 (J) Project A	10 Mar 2011 15:43		Technical Officer 1 (TD1)
	To act on client's offer	NOVA/STRICTEN/09/111 (J) Project A	09 Mar 2011 18:13		Senior Technical Officer (STO)
	To view approval by client	NOVA/STRICTEN/09/111 (J) Project A	09 Mar 2011 18:09		Manager (MANAGER)
	To view reply to query	NOVA/STRICTEN/09/111 (J) Project A	09 Mar 2011 18:04		Technical Officer 1 (TD1)
	To approve quote	NOVA/STRICTEN/09/111 (J) Project A	09 Mar 2011 12:30		Raymond (RAY)

Notification

Delete

Received Date	Description
10 Mar 2011 18:10	No movement for <a href="#">Plan, Surveys and Comments</a> since 09 Mar 2011 18:13

**An integrated platform for Authority officers to evaluate building plans, it handle all electronic documents, whether 2D/3D drawings, images, PDF, etc.**

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**CORENET ePlanCheck**

Welcome : Raymond (RAY)  
Login Date/Time : 14 Mar 2011 17:43

Desktop Personal ePlanCheck Update Search Report

**PROJECT LIBRARY**

Project Library

- NOVA/GT/CT/CT/DMS/2011/1
- NOVA/GT/CT/CT/DMS/2011/2
- NOVA/GT/CT/CT/DMS/2011/3

Project Library

SNo.	Action	Title	Path	Version	Usage Type	Last Updated On
1		Bungalow at Wilkino...	NOVA/GT/CT/CT/DMS/2011/1 - Ar...	2	RESIDENTIAL	10 Mar 2011 15:25
2		Service Apartment	Bungalow at Wilkinson Road		RESIDENTIAL	09 Mar 2011 20:01
3		St Paul's CHURCH	Manage Document...		NON-RESIDENTIAL	09 Mar 2011 17:51
4		DSTA_VS	View in Native Application		OFFICE	09 Mar 2011 17:06

Please check the rooftop

**Check and evaluate plan compliance against specific or all provisions in code library.**

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**CORENET ePlanCheck**

Welcome : Ra  
Login Date/Ti

Desktop Personal ePlanCheck Update Search Report

**PROJECT LIBRARY**

Project Library

- NOVA/GT/CT/CT/DMS/2011/1
- NOVA/GT/CT/CT/DMS/2011/2
- NOVA/GT/CT/CT/DMS/2011/3

Project Library

SNo.	Action	Title
1		Bungalow at Wilkino...

Manage Document...

View in Native Application

Edit

View Building Code Compliance C

Route...

Add Comment...

**Generate Evaluation Report...**

Upload New Version...

Download...

Copy To...

Move To...

Delete...

**Plan Evaluation Report**

Bungalow at Wilkinson Road

Route (Approval for Bungalow Plan @ Wilkinson Road)

Created Date : 06-Mar-2011 17:53 Created By : Raymond (RAY)

SNo.	Role	Officer	Decision	Decision	Remarks
3	Manager	Manager (MANAGER)	Approved	06-Mar-2011 18:00	Approved
2	Senior Technical Officer	Senior Technical Officer (STO)	Clear to Next Level	06-Mar-2011 18:08	Cleared For approval
1	Technical Officer	Technical Officer 1 (TO1)	Clear to Next Level	06-Mar-2011 18:07	Cleared STO for your comment please.
0	-	Raymond (RAY)	Submit Response	06-Mar-2011 18:05	I have updated the plan. Please see version 2 for the latest plan.
-	-	Technical Officer 1 (TO1)	Query Refined	06-Mar-2011 18:04	Subject: Clarification on Balcony Compliance Remarks. Requested Message: Please refer to clause 2.7.3. The staircase is too far from the end door.
-	-	Raymond (RAY)	Best Query	06-Mar-2011 18:00	Subject: Clarification on Balcony Compliance Remarks To: Technical Officer 1 (TO1) Message: Could you elaborate more on why the staircase will fail the compliance check?
1	TO	Technical Officer 1 (TO1)	Return to Author	06-Mar-2011 17:56	The staircase leading to the second floor will not pass the conditional check. Please rework.
-	-	Raymond (RAY)		06-Mar-2011 17:53	Attached is the architectural plan for the Bungalow @ Wilkinson Road. For your approval please.

Route (To seek approval)

**Generate evaluation report based on reviews, comments and notes contributed by evaluation team or officer(s).**

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# S'pore still tops for business

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

By ROBIN CHAN

IT'S a hat-trick.

has been ranked at

place to do business

Around the globe

forms were introduced

in the

last year.

But it was two

shortening the time

start-up business and

upon permit - that let

ly above New Zea

land's latest Doing Business rankings.

Making the use of the Internet was the

key to Singapore's success. An online

... important reforms shortening the time period ... to obtain a construction permit ... kept Singapore above NZ in the World Bank's ... Doing Business ranking.

one-stop shop helped slash the time it

takes to issue a construction permit from

102 days to 38 days.

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construction permit ... kept Singapore above NZ in the

World Bank's ... Doing Business ranking.

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area in which Singapore could improve. It takes one month more than it did the previous year to enforce a contract, and the cost of taking a case to court is about a quarter of the claim value.

Ms Soff said the top 10 economies remained almost unchanged - a reflection of the continuous commitment of richer nations to simplify regulations. Any country that stops reforming will lose its position in the competition, she said.

The annual report, now in its sixth year, is put up by the World Bank and its private lending arm, the International Finance Corp (IFC). It ranks 183 economies according to 10 indicators of business regulation - from starting a business to paying taxes and closing a business.

The aim is to show how simplifying procedures encourages investment, creates jobs and spurs growth. The top 10 are all high-income economies.

East Asia and the Pacific had the greatest momentum of reform among all the re-

gions with 63 reforms made in the past year, up from 46 the year before, the report noted. Leading the charge was Thailand, which recorded four big improvements to climb from 19th to 15th place.

Ms Dahlia Khalifa, a co-author of the report, said that countries recognised the need for regulatory reform to make them more competitive and are "clearly committed to reform agendas".

Overall, Azerbaijan was deemed the top reformer, after upgrading in seven areas. It leapt 64 places from 97 to 33. The Central Asian and Eastern European region recorded the most number of reforms in the world, with 26 of the 28 countries implementing a total of 69 reforms.

World Bank/IFC vice-president for financial and private sector development Michael Klein said that having "good rules is a better basis for healthy business than 'who you know'".

chmckir@sp.com.sg

TOP OF THE WORLD	
Ease of doing business	
2009 Rank	2008 Rank
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	10
10	9
11	11
12	12
13	13
14	14
15	15

B3 本地新闻 我报 星期四 2008年9月11日

## 我国连续三年是全球最易经商地

新加坡在世界银行昨天公布的《2009年全球营商环境报告》中，连续第三年被列为全球最容易做生意的地方。我国在这方面的排名从全球第5位跃升到第3位，这是调查榜单上的一个创举。二和四的分别名列纽约和芝加哥。

从102天减少到38天... 房地产网络 (CORENET) 提交

**CORENET helps Spore to retain World No. 1**  
**World Bank ranking for Ease of Doing Business**  
 2008 : Reduced total construction permitting time from 102 days to 38 days  
 2010 : Reduced total construction permitting time from 38 to 26 days  
 Future : ePlanCheck-driven transformation

## e-Government in Real Estate, Construction & Infrastructure

**Malaysia**

Perbadanan Putrajaya

- IT Master Plan
- Integrated Planning & Management

Selangor State

- IT Master Plan
- Land Alienation

Kota Kinabalu

- Property Valuation

Indonesia

- Districts Planning

Brunei

- Land Transport

Saudi Arabia

- Urban Development & Land Management

**Singapore**

Singapore Government  
Integrity • Service • Excellence

Urban Redevelopment Authority

- Integrated Land Use
- Car Park Administration
- Electronic Development Application

Building and Construction Authority

- CORENET e-Submission
- Automated Plan Checking
- Integrated Submission Processing
- Electronic National Productivity & Quality Specification

JTC Corporation

- Plan Endorsement & Approval

Land Transport Authority

- Vehicle Inspection & Type Approval

Ministry of Community Devt, Youth & Sports


- Integrated Case Mgt

Ministry of Law

- Legal Aid Management

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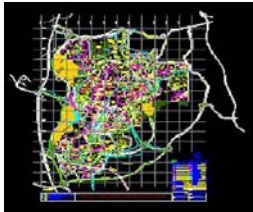
New frontiers for e-Government & Healthcare



## E-Government (Real Estate & Construction) Outside Singapore

### Malaysia's Government City ..... Putrajaya

- Vision of transforming Oil Palm Plantations and Natural Vegetation a 4,900 Ha Intelligent Garden City in 10 years.





The Putrajaya Authority of Malaysia embarked on Integrated City Management (SUMBER-PUTRA) in 1998:

- e-Submission & e-Information
- e-Processing & Approval
  - Development Planning
  - Development Control
  - Land Management
  - Building Control
  - Property Register & Valuation
  - Planning Permission Expert

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New frontiers for e-Government & Healthcare



## E-Government (Real Estate & Construction) Outside Singapore

### Malaysia's Government City ..... Putrajaya

Impact on Putrajaya through ICT-enabled automation and processing management



ApplicationType	Duration		Saving
	Manual	Sumber-Putra	
Layout	12 weeks	4 weeks	67%
Pre-comp	6 weeks	2 weeks	67%
Erection of Building	8 weeks	3 weeks	63%
Earthworks	4 weeks	3 weeks	25%
Building Plans	12 weeks	6 weeks	50%

Up to 2/3 reduction in actual activity time with direct contribution to Procedure Time, one of the major "Dealing with Construction Permits" Indicators, with potential savings in Procedure Cost, another DCP Indicator.

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New frontiers for e-Government & Healthcare



Asia-Pacific  
Economic Cooperation



Thank you for your attention

For more information, please contact:

Thomas Lim

DID: +65 6216 9866

Cell: +65 9623 8802

Email: [thomas.lim@nova-hub.com](mailto:thomas.lim@nova-hub.com)

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