

Development and Implementation of Hong Kong Standard Industrial Classification (HSIC)

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Outline

- The Hong Kong Standard Industrial Classification (HSIC)
- The Central Register of Establishments (CRE)
- Development of HSIC V2.0
- Strategic considerations in developing and implementing HSIC V2.0
- Implementation plan for HSIC V2.0
- Concluding remarks

The Hong Kong Standard Industrial Classification (HSIC)

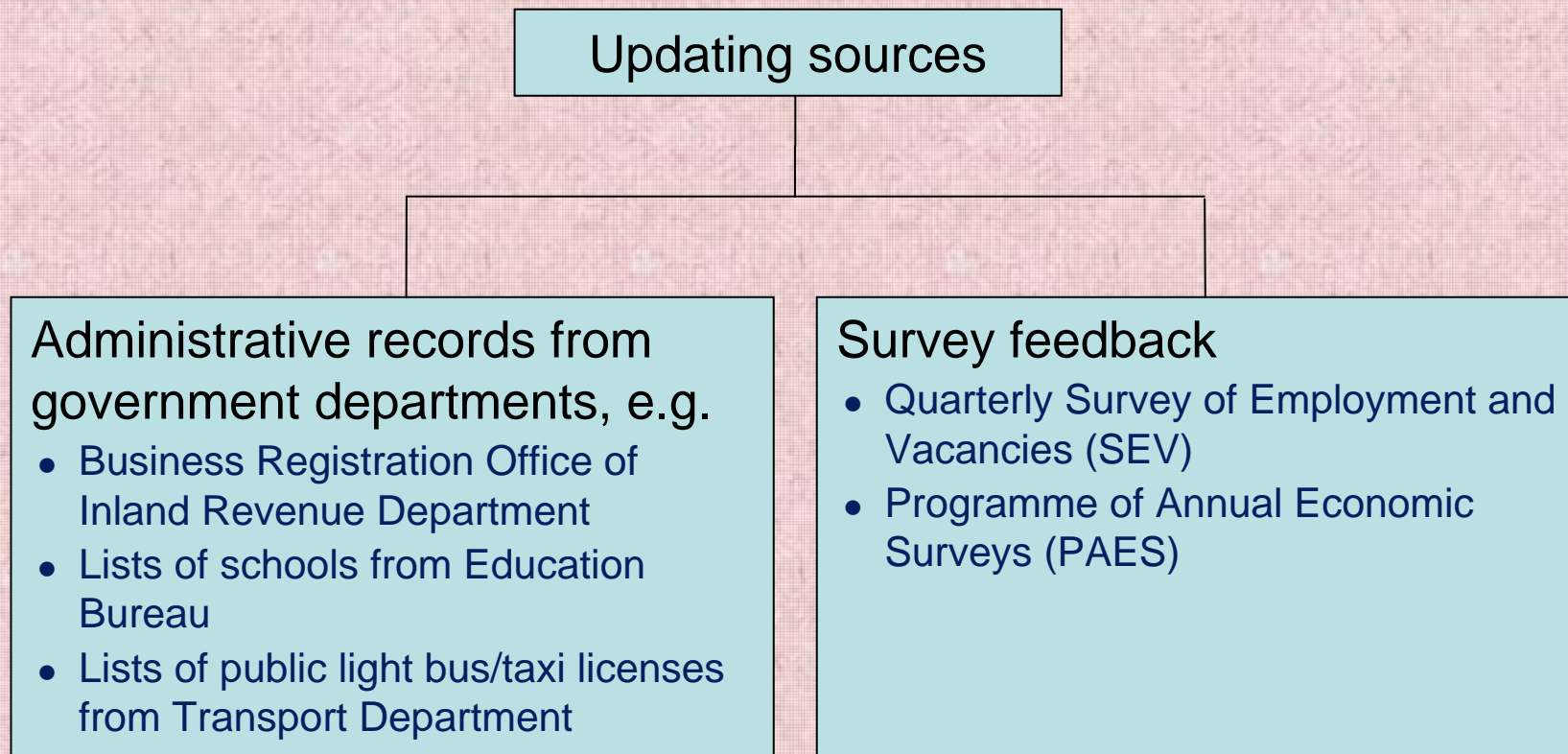
- Version 1.0 introduced in 1990, lastly revised in 2001 to Version 1.1
- Devised and maintained by Census and Statistics Department (C&SD)
- A basic stratification for sample selection and for data compilation, analysis and dissemination
- Compatible with ISIC Rev. 2

Central Register of Establishments (CRE)

- A computerised sampling frame of business establishments maintained by C&SD, containing
 - Registered name, address, telephone number, operating status, industry (HSIC 6 digit), employment size, etc.
- 350 000 active establishments, comprising
 - Commercial undertakings
 - Semi-government organizations
 - Non-profit making bodies
- Comprehensive and up-to-date

CRE - Updating

- Updating frequency: Quarterly



CRE – Applications

Applications

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graph TD; Applications[Applications] --- CSD[C&SD Users]; Applications --- Public[The Public];
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C&SD Users

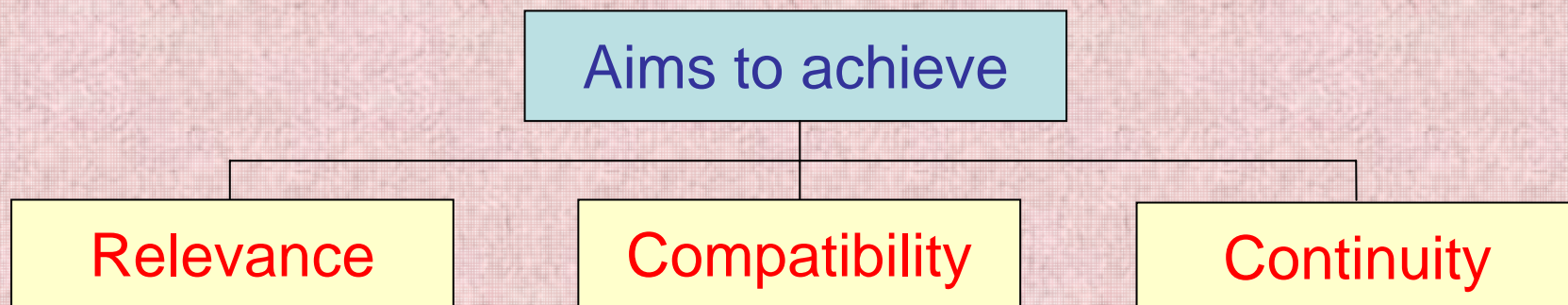
- Sampling frame for surveys on business establishments

The Public

- Provision of 20% sample listing of establishments comprising four disclosable particulars (name, address, type of business and employment size class)
- For survey, publicity, business promotion and research purposes

Development of HSIC V2.0

- Review of HSIC to reflect
 - Significant changes in the structure of Hong Kong economy
 - Emergence of new economic activities
- Incorporate the conceptual and structural changes in ISIC Rev. 4



Changes from HSIC V1.1 to HSIC V2.0

- Changes in structure of classification scheme
 - From 4-level to 5-level hierarchical system
 - From 9 to 21 top level groups
- Changes for enhancing international comparability
 - High degree of conformance with ISIC Rev. 4 up to level 4
 - Enhanced data relevance through new groups at higher levels, e.g. “Information and communications”, “Water supply; sewerage, waste management and remediation activities”
- Changes initiated by Hong Kong to better meet local requirements
 - From 886 to 1000 6-digit codes at the most detailed level

Hierarchy of different systems

HSIC V1.1		HSIC V2.0		ISIC Rev. 4	
Code (digit)	No. of Categories	Code (digit)	No. of Categories	Code (digit)	No. of Categories
1 numeral	9 Industry Sectors	1 alphabet	21 Industry Sections	1 alphabet	21 Sections
3 numeral	84 Major Industry Groups	2 numeral	88 Industry Divisions	2 numeral	88 Divisions
4 numeral	404 Industry Groups	3 numeral	221 Industry Groups	3 numeral	238 Groups
		4 numeral	483 Industry Classes	4 numeral	419 Classes
6 numeral	886 Industries/Trades	6 numeral	1 000 Industry Sub-classes	Not applicable	

Changes initiated by Hong Kong to better meet local requirements – examples

- Better reflect **significant local economic activities**:

% contribution to GDP (at current factor cost)		
	1991	2006
Services	77.8%	91.2%
<i>Import/Export</i>	15.1%	21.4%
Manufacturing	14.5%	3.2%

- “Import/Export” as a separate level 2 group in HSIC V2.0
 - Not found in ISIC Rev. 4 (subsumed under Section G “wholesales and retail trades” and becomes not separable)
 - “I/E” further divided into two level 3 groups in HSIC V2.0
 - “Import for wholesale” and
 - “Export trade”
 - Provides good framework for researches on domestic wholesaling activities

Coding Scheme for I/E, Wholesale and Retail Trades

HSIC V1.1		HSIC V2.0		
Level 2 (3-digit)	Levels 3 and 4 (4- and 6-digit)	Level 2 (2-digit)	Level 3 (3-digit)	Levels 4 and 5 (4- and 6-digit)
Retail 621	Product details 621???	Retail 47	Type of selling means/products 47#	Product details 47#???
Wholesale 611-612	Product details 61#???	Wholesale 46	3rd digit being a dummy zero 460	Product details * 460???
Import/Export 631-632	Product details 63#???	Import and export trade 45	Export trade 451	Product details * 451???
			Import for wholesale 452	Product details * 452???

* 4- and 6-digit codes under the three categories will have the same last 3 digits if they represent the same product(s).

Changes initiated by Hong Kong to better meet local requirements – examples

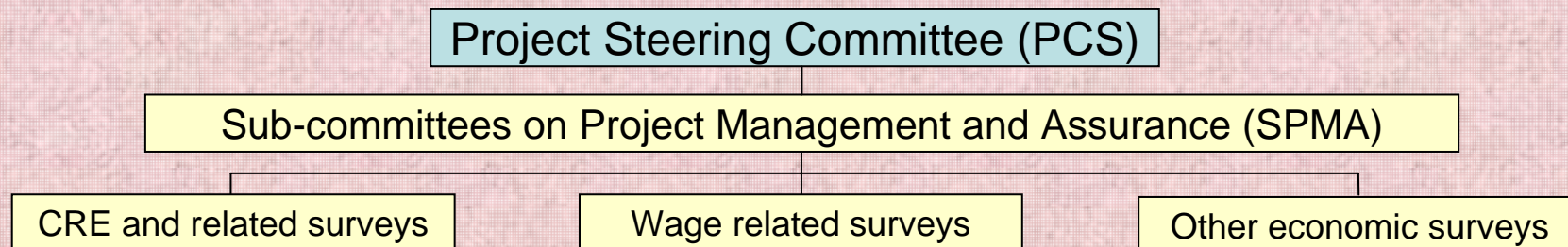
- **Reducing** number of lower level codes for **manufacturing** activities
 - No. of 6-digit codes under “Manufacturing sector” reduces from 372 to 244
 - For example, “Watches and clocks, mechanical, manufacturing” will no longer be broken down into the four sub-categories
- **Refined** industries with **local significance**
 - Attempt to split level 3 or 4 codes to level 5 codes
 - Further breakdown of miscellaneous activities
 - Examples, “Yoga and gymnastics instruction”, “weight control and slimming services”, “foot reflexology”

Strategic considerations in developing and implementing HSIC V2.0

- Substantial and extensive impacts on statistical infrastructure, not restricted to CRE but virtually all economic survey systems (12 annual and 9 sub-annual survey systems).
- Social survey systems involving classification of employment information will also be affected (2 survey systems including population census).
- A strategic and centrally coordinated approach to manage the changes
 - Institutionalisation
 - Consultation
 - Continuity
 - Resources acquisition
 - Capacity building/implementation tools
 - Other implementation issues

Institutionalisation

- “Working Group on Revision of HSIC”
 - Headed by a Directorate officer, senior professionals serving as members
 - To map out implications, work out implementation approach, advise and monitor work progress, deliberate issues and make recommendations on implementation
- PRINCE (Projects IN Controlled Environments) methodology
 - A well established project management methodology
 - Items to be managed include (i) function, (ii) time, (iii) resources, (iv) quality, and (v) risk
 - Organisation :



Consultation

- Early involvement of stakeholders
- Consultation within C&SD from time to time
- External consultation exercise for stakeholders from Jan 2007 to Feb 2007
 - All government bureaux and departments
 - More than 210 organisations, comprising semi-government bodies, academic institutions, federations/chambers of commerce and leading companies
 - Invited written comments and conducted briefing sessions

Continuity

- Maintain stability and continuity of data series over time

Two major activities

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graph TD; A[Two major activities] --> B[Converting HSIC codes of existing records in CRE]; A --> C[Parallel coding in CRE for a transitory period];
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Converting HSIC codes of existing records in CRE

Parallel coding in CRE for a transitory period

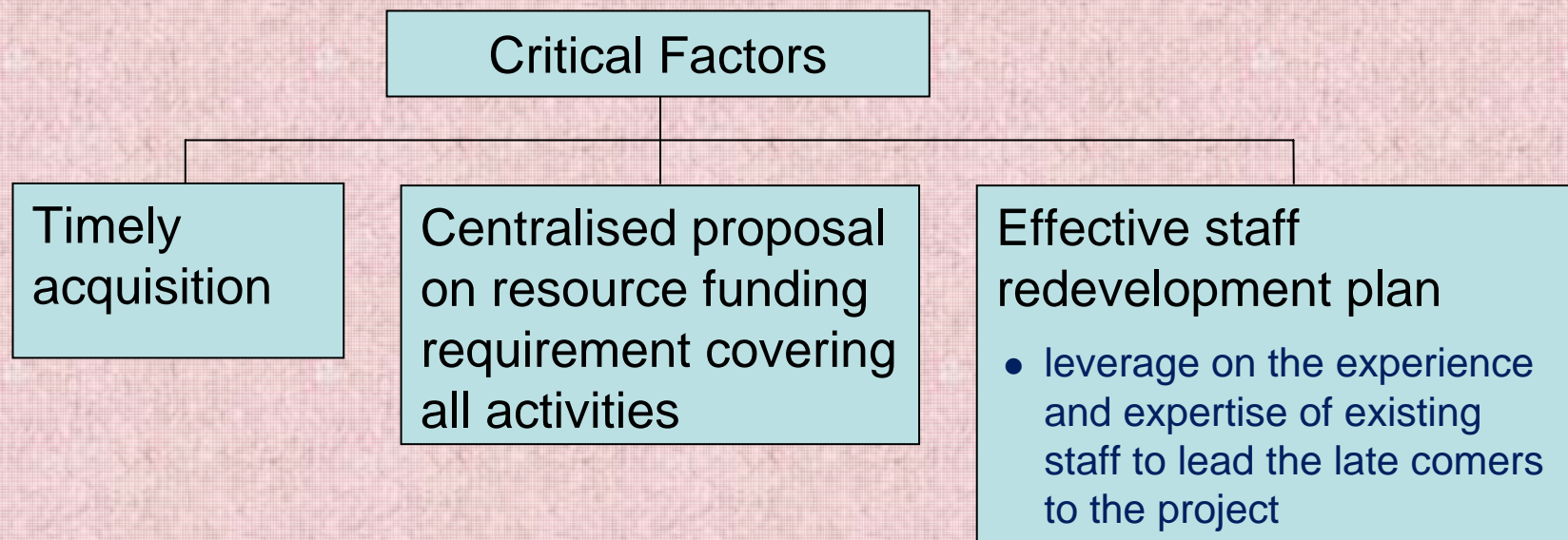
- CRE Special Updating Exercise (recode existing records)
 - Covered 350 000 active establishments in CRE
 - 210 000 establishments involved splitting/regrouping of industry codes
 - A resource consuming task requiring some 250 man-months for telephone interview and field enumeration

Continuity (cont'd)

- Parallel coding in CRE
 - Some 100 man-months required for system enhancement and coding
 - Transitory period for eight reference quarters in 2008 and 2009
 - A basis for redesigning surveys, including
 - Precision of estimates
 - Sample size requirement
 - New demands due to new industry groups
 - Benchmark for backcasting historical series

Resources acquisition

- Resource required for
 - System enhancement, recoding and parallel coding in CRE
 - Extended impacts on various data collection programmes and corresponding computing systems



Capacity building/implementation tools

- Implementation of HSIC V2.0 : an important statistical capacity building process
- Need to equip statistical staff, stakeholders and users to manage the changes
- Implementation tools
 - Self-contained HSIC V2.0 Manual, with web-version also available
 - Search tool on C&SD website
 - Concordance tables between HSIC V2.0 and HSIC V1.1
- Training sessions for all relevant staff
 - Covering topics on adaption and use of HSIC V2.0 in data collection programmes, and other points of common interest
 - Intranet depository of issues of common interest for information sharing

Other implementation issue

● Legal issue

- Reclassification of economic activities leads to changes in survey coverage
- Amendments to survey orders in the Census and Statistics Ordinance is required
- Early start is necessary to cope with the time consuming legislative procedures

Concluding remarks

- Implementation of HSIC V2.0 affects not only a specific business register but the entire existing statistical infrastructure
- Substantial changes involved, which have to be carefully managed
- A valuable project management experience, which can be referred in handling statistical exercises of similar scale in the years to come

Thank You



Census and Statistics Department

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