IT-politik i Japan *Från hård till mjuk*

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Eftersom mycket av grundmaterialet är på engelska, har jag valt att konsekvent använda engelska i presentationen.

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Looking at... **IT policy**

Common challenges:

Aging society, shrinking work force Regional disparities Old industries crumbling Infrastructure in place, services lagging



IT policy objectives



IT **budget 2004**





(for IT, telecom and postal related activities)

Program to support broadband implementation: 5,2 billion SEK

(Source: The parliament homepage)

96 billion SEK

(for realization of advanced IT society) (Source: MIC White Paper 2004)

Competition is...



...the driver of all development. Regulation is only applied where competition is not working.

...allowed once a new market is viable. Regulation is there to guide and create the market.

IT Strategies

- Responsibility for IT issues divided among all ministries
- Initiatives on local level, often driven by individuals.
- Few national strategies, directives, objectives or evaluations.

- Ministers fight for IT responsibility (threat of IT ministry)
- Central, detailed vision
- Accountability for distributed, measurable objectives

e-Japan (2001): **Hard issues**



Concretized in the Priority Policy programs

Defined objectives and deadlines given to appointed ministries



Example of priority area: Infrastructure

Formation of World's Most Advanced Information & Telecom Networks

Targets

1 Establishment of environment for internet utilization

Realization of 24-hour internet connection available to everyone by FY2005

 High-speed access available to 30M households

 Ultra high-speed access available to 10M households

2 Low rates for internet connection by FY2005

Results by 2002

1 Establishment of environment for internet utilization

Available access:

- High-speed
- Ultra high-speed 14M households
- 35M households (of 47M hh)



2 Low rates for internet connection by FY2005 24-hour high-speed connection available at 2,394 Japanese yen (= about 200 SEK)



Evaluation 2002

"The highways are in place, but no cars are driving on them"

Actual BB usage (of available access)



So, what's the problem?



e-Japan II (2003): "Realizing an energetic, worry-free, exciting and more convenient society through effective IT utilization"

e-Japan II

The new ICT society of Japan

Priority usage areas:

- Health
- Food
- Living
- Financing for smaller businesses
- Knowledge
- Employment and labour
- Public service

New IT social infrastructure

- NG ICT infrastructure
- Reliable and secure environment
- R&D
- Human resource development and education
- International relationships

Example of priority area: Health

Medical institutions work together to offer patient-centered service. Health care is improved by inexpensive, safe and worry free medical services.

Objectives

1 Establishment of a system that allows sharing of medical info between health institutions by 2005.

2 Establishment of system that provides statistical information on medical institutions.

3 Introduction of online billing system, partly 2004, fully 2010.

Challenges:

- Standardize names of diseases, etc
- Network security
- Privacy

Evaluation

- Customer centric care?
- More efficient and better services?
- Improved data collection?
- Improved general health?

Example of priority area: Food

The future is not just about enjoying the way food tastes, but about being able to educate oneself on how food is produced, delivered, and sold. This is the future of worry-free food.

Objectives

1 Establishment of a system for tracing origin and movement of all domestic cattle by 2004.

2 Online system for production data for all domestic beef by 2005.

3 Online system for transactions used by 50% of all food distributors by 2005.

4 IT offering info about customer preferences and market used for management of agriculture, forestry and fisheries.

Challenges:

- RFID tag based tracing system
- Third party agency for evaluation
- IT competence of food industry staff

Evaluation

- More reliable food info available to consumers?
- Improved methods and flexibility when problems occur?
- Reduced logistics and production costs?
- Increased intl competitiveness?

Evaluation 2004

Economic effects measurable

- Economic growth rate increased
- New jobs created
- Labor productivity increased

Mobile market: world's most advanced

- Mobile internet: 83% (today: 87%)
- Mobile phone cameras: 32% (today: 85%?)
- 3G: 10% *(today: 43%)*

Broadband: world's cheapest

• ADSL per month: about 150 SEK (today: 82 SEK)

Changes in societal structures...

There are a number of social problems after 2006, when Japan faces the declining birthrate and aging society

Environment

- Stop the population decline by 2007
- Create a livable environment for the aged
- · Win back faith in food safety
- Enhance local community relationships and reliability

Labor and Employment

- · Employment opportunities for the elderly
- Job opportunity for young workers
- Improve working environment for women
- Secure job-hopping and skill-based employment systems

Health Care / Welfare

- Realize a patient-orientated remote medical care system
- Reduce malpractice by disclosing information

Pension system reform

Education / Human Resources

- Education emphasizing mathematics and sciences
- Reduce adolescent crimes
- Enhance international competition among undergraduate/graduate studies

Government Administrative Services

- One-stop administrat ve service in relocating
- Administrative cos cutting by computerization of procedures

Transport and Distribution

- Reducing traffic accidents, alleviating transport congestion and train crowding
- Create a barrier-free environment for the aged and disabled

Public Safety and Disaster Prevention

- Dissolve fear against terrorism and serious crimes
- Measures for earthquakes, typhoons and major accidents
- Restore public order from crimes such as picking

International

- Presence in international organizations such as the UN
- Tight relationships with Asian countries

Environment / Energy

- Stop the evolving global warming
- Reduce was e and facilitate recycling
- Develop natural energies such as solar power
- Proper use of biotechnologies

Economy / Industries

- Recover economy and enhance competitive power
- Prevent deindustrialization in the manufacturing industry
- Promote efficiency by ICT-based business management
- Promote Japanese culture and arts

...and in market dynamics



Laws and regulations soon outdated

Review and re-definition needed of:

- Market drivers and players
- Competition
- Cost plan
- Essential and universal service
- Consumer protection
- Standardization
- International consistency

Autumn 2004: Policy roundtable

Akira Mitarai	Mitarai Corporate Senior Executive Director, Sharp Corporation		Masaki Akiyama	Director, Matsushita Electric Industrial Co., Ltd.
Gota Iwanami	Representative director, INFOCITY, INC.			President, Panasonic System Solutions Company
Hideaki Takahashi Deputy President and Representative Director, Fuji Xerox Co., Ltd.		Masao Horibe	Professor, Chuo University Faculty of Law ISPS	
		Mituo Yamaguti	Information and the communication group CSO, Hitachi, Ltd.	
Hideo Takahashi Industrial Affairs Bureau Director, Nippon Keidanren		Naoji Izaki	Board Director, vice president, NIFTY Corporation Service division	
Hideyuki Tokuda Professor, Faculty of Environmental Information, Keio University		Nobuyuki Arai	General Manager, Research Institute of Capital Formation, Development	
Hiroyuki Watanal	Hiroyuki Watanabe Managing director, Toyota Motor Corporation		Bank of Japan Banks	
Hisamiti OkamuraLawyer, Instructor Kinki University & Nara Institute of Science and		Norihisa Yonezav	wa Managing director, JAFCO Co., Ltd.	
Technology	Technology		Noriko Wakihama Announcer, Yomiuri Telecasting Corporation	
Hisao lizuka			Susumu Funamoto	
			Research by Information Technology Broadcasters	
Ikufumi Niimi	Professor, School of Law, Meiji University		Syozo Fukui	Representative director president, Tomo-Digi Corporation
Itami Hiroyuki			Technical office director, Tokyo Broadcasting System, Inc.	
Jiro Kokuryo	Professor, Faculty of Environmental Information, Keio University		Tadao Tajima	Representative director president,K-Opticom Corporation.
	Jyuniti Hamada Professor, Interfaculty Initiative in Information Studies, The University of Tokyo		Takashi Moriyasu Secretary, Toshiba Solutions Corporation Systems Integration	
			Technology Center Think tanks Teruyasu Murakami Chief Counselor, Nomura Research Institute, Ltd.	
Kazuko Otani			Teruyasu Muraka	
Kazumasa Enami Director-General, NHK Science & Technical		Tokumiti Murakar Mitsubishi Electric		
Research Laboratories		Toshinori Takaha		
Kishihara Takamasa Bureau chief, Mobile Content Forum		Limited	shi managing areata policy ried ande aner, i correc	
Kiyoshi Tokuhiro NTT DoCoMo	Chief, Ubiquitous Services Department, Product & Services Divisi	ion,	Yasuhiko Ito director.	Member of the Board Senior Vice President, Technical control division
Koichi Ikumi	Senior Vice President, NEC Corporation Appliances	manufa		KDDI Corporation Telecom operators
Mariko Sano	Bureau chief, SHUFURENGOKAI		Yoh'ichi Tohkura	Department Director, Development and Operations Department,
Masahiro Tajima Chairman of the board of directors, Shirogane-Cyberpol, Lawyer Legal firms			National Institute of Informatics Research institutes	
		Yutaka Maeda	Senior Vice President, Oki Electric Industry Co., Ltd.	
	-		- and the interested	erne mer resident, en Erene meder joer, Eer

Formulated a society Charter

Free and diverse info distribution

Information access and dissemination rights Information diversity Promotion of information technology in business and society Information literacy



Safe and secure info distribution

Privacy Information security Intellectual property rights Information ethics

SUPPORT

Construction of new social infrastructure

Balance between the real society and the cyber society Systems for local and international coordination and cooperation

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...and listed **21 IT issues** to address

- (1) A framework for protecting **privacy** in medical care
- (2) A framework for protecting personal info being held by public bodies and businesses
- (3) Increasing the **security awareness** of the average user
- (4) Overcoming the **vulnerability** of information networks
- (5) Dealing with computer viruses
- (6) Guaranteeing the security of electronic payments
- (7) Dealing with bad commercial practices using the Internet
- (8) Dealing with SPAM
- (9) A framework for an **intellectual asset** strategy
- (10) A framework for protecting **copyrights** for digital materials
- (11) Eliminating the shortage of secondary use of contents
- (12) A framework for a scientific technology ethic in information technology R&D
- (13) Promoting the use of ICT in education
- (14) Eliminating the shortage of high-level ICT human resources
- (15) Eliminating the **regional gaps** in high-level services
- (16) Eliminating the gaps in electronic municipalities
- (17) Revising the priority level of ICT in putting in place social assets
- (18) Making for a healthy influence on the growth of young people
- (19) Promoting the convenience of **e-government**
- (20) Promoting the efficient use of ICT in medical care
- (21) Standardization of operations at regional public bodies

u-Japan (2005): Anytime, anywhere, anything, anyone



IT 4U

Ubiquitous

Connects everyone and everything

Easy connection to networks "anytime, anywhere, by anything and anyone". • A society where ICT will be everywhere in daily life and can easily be used.

> Person to Person plus Person to Goods, and Goods to Goods • In every aspect, communication will play an even more important role

Universal

Friendly communication

Friendly to people

- Can be used by anyone without thinking of the equipment or network
- The aged and disabled will be able to actively participate in society with ICT

Contact from heart to heart

 Heart-to-heart communication overcoming barriers between generations and localities to create togetherness

User-oriented

Based on users' viewpoints

Close to the user

- A society that is even more aware of user convenience than the ideas of the supply side.
- Developing technologies and services that are closely connected to our needs

Users can be suppliers, too

 Using the power of networking to make 100 million "prosumers"

Unique

Creative and vigorous

Creation of vitality of the individual

 A new society where it is easy to have dreams and take on challenges even for individuals

Vitalize the society

- Creation of new social systems and business services
 - Get out from stereotype and realize local revitalization with creativity



Source: Xerox Parc Lab

u-Japan: Action packages



Challenges and visions



Challenges *identified*

Memory Batteries Display Input Output User interfaces Operative system Interconnectivity Mobile beyond 3G Spectrum allocation IPv6 Digital divide

Visions concretized



And realized!





40 000 markers with unique identity "ucode" placed in Tokyo

128 bytes => "one trillion tags per day for one trillion years"

Example: Free Mobility Assistance project



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Example: Tourist guide



Example: Food traceablity





検索結果 いばらきから真心をこめて「私たちの自信作を届けます」 カルゲン会さしまトマト音 Type of カタログ番号 00020826 Information ●作物名 トマト 品目 hyb produce about the farm 農産物紹介 (tomato) ルゲン会さしまトマト部会は10人で構成されています。4月から6 集荷時間には部会員が必ず全員集まり、毎日情報交換を行い、よ を出荷しております。茨城県特別栽培農産物(化学農 り良いトマトを作るため努力しております。病害虫の発生や、今後の Shipment date, と学肥料5割減)の認証を受けており、毎日生産者で情報 劉島の思索など安主に話し会います りよいトマトの栽培を目指し日々努力しております。 ●品種名 (桃太郎エイト)(桃7 Information date reaching カルゲン会内、まトマト部会 特別載培 ● 栽培区分 播種日:H16.10.中省 about 60.000/7 - 7 完績日・日171下旬 mature state, 除草日:なしく行いま chemicals 出荷情 last 良質堆肥と微生物資材、微量要素を使用し土作り used; type and を行っています。また夏季には堆肥と微生物資材 recommended (コフナ)を圓場に投入し、ビニールで覆い太陽熱 消毒を行うことにより、化学農業を使用せずに土壌 how much 消毒を行っています。 consumption 渝 殺虫剤:5回 経菌剤・6 回 除草剤:0回 date 独自の防除基準であります。農業の使用効果が高める 虫の発生初期に行います。 Type of ● POPをパンコンで開くにはPowerPointもしくは<u>PowerPoir</u> cultivation, <u>Viewer</u>が必要です。 POPの使い方については<u>こちら</u>をご覧ください。 places and dates. When and where the ●出荷者名 カルゲン会さしま ●住所 306-0505 茨城県猿島郡猿島町菅谷1388-1 produce was 開始期:2005/04/20 ●<<p>
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 中
 前
 最盛期:2005/5/20 seeded, Contact details 終了期:2005/6/20 planted, and for more 出荷者名 カルゲン会さしま 四房明正 代表者 weeded. information 相当素氏名 沼房明正 住所 306-0505 about the 茨城县被自翻波自即营公1388--0280-88-0129 TEL FAX produce 0280-88-0852 35

Example: Unorganized library



The bigger picture



Source: Istituto di Scienza e Tecnologia dell'Inquinamento Luminoso

The regional divide

Interregional Internet Bandwidth, 2002



Endangered Cultural Diversity?

Books:

English	28.0%
Chinese	13.3%
German	11.8%
French	7.7%
Spanish	6.7%
Japanese	5.1%
Russian	4.7%
Portuguese	4.5%
Korean	4.4%
Italian	4.0%

Servers:

English	84.3%
German	4.5%
Japanese	3.1%
French	1.8%
Spanish	1.2%
Swedish	1.1%
Italian	1.0%
Portuguese	0.7%
Dutch	0.6%
Norwegian	0.6%

Tack så mycket!

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