

## Public Administration Drivers for Grid

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**Global Village**  
is  
an Award-winning,  
professional services and solutions business,  
in convergence, new media management and trusted/secure communications solutions,  
built on a heritage of achievement,  
in new media, broadband, mobility, wireless, digital rights management, ePayments and security.

## Global Village Ltd

- Convergence, digital media management and trusted communications solutions
- Heritage of broadband, wireless, mobile, digital rights management, ePayments, security
- Winner EU Guide Award for Online Excellence under eContent program – best of innovation in public services
- Joint winner Broadband4Devon project
- DRM strategy in global Infotainment for the leading global mobile operator
- Global blue-chip partnership base built up over 25 + years e.g.

US	Japan	Korea
Italy	Netherlands	Spain
India	Sweden	Germany
Finland	South Africa	Australia
China	Canada	France



## Governmental Departments meshed and distributed

UK Departments	Cross departmental issues
<ul style="list-style-type: none"> <li>• <b>Treasury, Inland Revenue and customs and excise</b></li> <li>• <b>Foreign and Commonwealth Affairs</b></li> <li>• <b>Trade and Industry</b></li> <li>• <b>Home Office</b></li> <li>• <b>Health</b></li> <li>• <b>Culture, Media and Sport</b></li> <li>• <b>Cabinet Office and for Social Exclusion</b></li> <li>• <b>Northern Ireland, and Wales</b></li> <li>• <b>Constitutional Affairs</b></li> <li>• <b>International Development</b></li> <li>• <b>Education and Skills</b></li> <li>• <b>Communities and Local Government</b></li> <li>• <b>Work and Pensions</b></li> <li>• <b>Environment, Food and Rural Affairs</b></li> <li>• <b>Defence</b></li> <li>• <b>Transport and Scotland</b></li> </ul>	<ul style="list-style-type: none"> <li>• Identity management</li> <li>• Trust</li> <li>• Commerce / payments</li> <li>• Skills / learning</li> <li>• People and animal health</li> <li>• Planning</li> <li>• Tax and benefits</li> <li>• Security / Home security</li> <li>• Crisis management</li> <li>• Terrorist</li> <li>• Natural disasters</li> <li>• Pandemics</li> <li>• Infrastructure management ( transport / people)</li> <li>• Economy</li> <li>• Fraud</li> <li>• Data management / statistics reporting</li> <li>• Pattern recognition</li> <li>• Policy / regulatory compliance / tracking</li> </ul>

## International Agencies

- The United Nations – Preserving the peace – 191 countries
- Commonwealth – 54 countries – 1.7bn people
- NATO – the Atlantic Alliance
- Organisation for security and cooperation in Europe
- Not for profit
- Charities

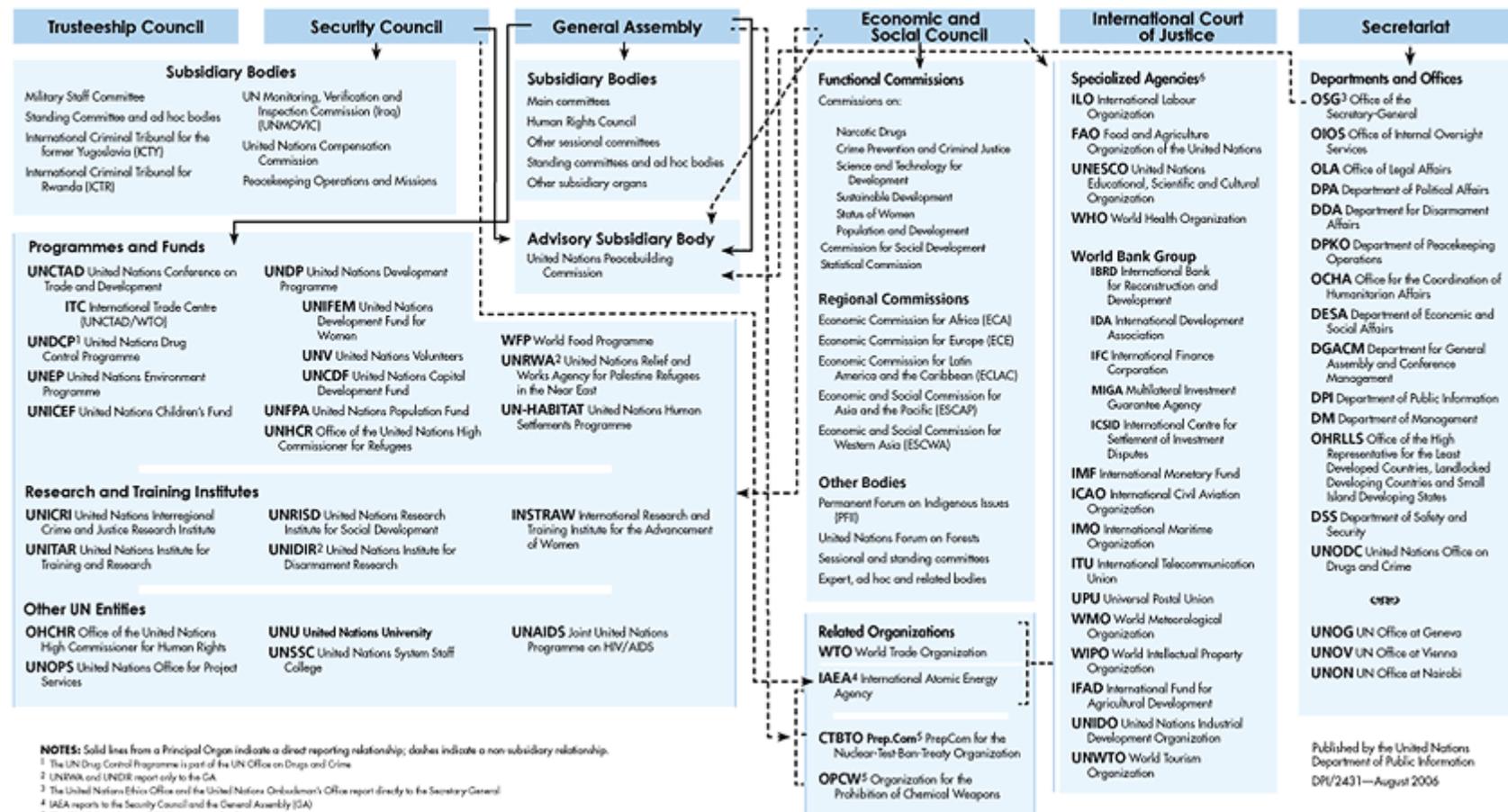
## United Nations

Main departments	Cross departmental issues
<ul style="list-style-type: none"> <li>• Human Rights</li> <li>• Peace and Security               <ul style="list-style-type: none"> <li>– Peace building</li> <li>– Counter terrorism</li> </ul> </li> <li>• Economic and social council ( regional)               <ul style="list-style-type: none"> <li>– WTO</li> <li>– Disaster relief</li> <li>– food</li> </ul> </li> <li>• Trusteeship</li> <li>• Court of justice</li> </ul>	<ul style="list-style-type: none"> <li>• Identity management</li> <li>• Health</li> <li>• Planning</li> <li>• Loans, grants, benefits, payments</li> <li>• Crisis management</li> <li>• Terrorist</li> <li>• Natural disasters</li> <li>• Pandemics</li> <li>• Commerce payments</li> <li>• Education</li> <li>• Fraud (process management)</li> <li>• Justice system</li> <li>• Regulatory / policy management and compliance</li> </ul>

# The United Nations

## The United Nations System

### Principal Organs



Published by the United Nations  
Department of Public Information  
DPI/2431—August 2006

## Charities and NGO's

Entity	Cross entity issues
<ul style="list-style-type: none"> <li>• Red Cross</li> <li>• UNICEF</li> <li>• Earthquake / volcano / tsunami/ hurricane / typhoon monitoring</li> <li>• Weather</li> <li>• Climate monitoring</li> <li>• Health</li> <li>• IMF</li> <li>• ITU</li> <li>• WTO</li> </ul>	<ul style="list-style-type: none"> <li>• Identity management</li> <li>• Health</li> <li>• Planning</li> <li>• Grants, benefits, payments</li> <li>• Crisis management</li> <li>• Terrorist</li> <li>• Natural disasters</li> <li>• Climate monitoring</li> <li>• Environmental management</li> <li>• Pandemics</li> <li>• Education / learning</li> <li>• Economic and social divides</li> <li>• Standards</li> <li>• Trust / Fraud</li> </ul>

## Public Administration Drivers ( global survey)

- Drivers
  - Budget cuts,
  - Increased scrutiny by citizens,
  - Transparency,
  - E-government,
  - Business like,
  - Smarter in use of technology
- Leading to
  - Adaptability / Flexibility
  - Citizen focused employees and processes
  - Commitment to transparency
  - Attention to the business case
  - Openness to private sector practices and partners

## Public Administration Drivers ( global survey)(1)

- Citizen behaviours will change as follows
  - Expectation of personalised citizen service
  - Expectations of customised service offering
  - Expectations of speed and accuracy of fulfilment
  - Expectations of follow up communication
  - Levels of knowledge about service, processes and channels
  - Openness and ability to use new delivery channels
  - Willingness to pay for certain types of information or use of new channels
  - Expectation of transparency to citizen in use of funds
  - Trust
  - Expectations of privacy

## Public Administration Drivers ( global survey)(2)

- Most critical ways in which IT can facilitate the improvement of citizen relationships
  - Ensuring greater citizen access to public information
  - Streamlining / expansions of service delivery channels
  - Enabling customisation of services
  - Improving transparency and efficiency of procurement
  - Accelerating back office processing of documents
  - Enabling citizen involvement in new service / channel design
  - CRM software implementation
  - Availability of performance management data on citizen-facing processes to senior managers

## Public Administration Drivers ( global survey)(3)

- Information technology to have greatest impact on public services innovation in following areas
  - Improved information sharing
  - Improvement / expansion of service delivery channels
  - Improved training and “continuous learning” processes
  - Enhanced communication and collaboration between employees
  - Automation of back office operations
  - Greater sharing of information with partners and other third parties
  - More efficient tracking / reporting of compliance requirements
  - Automation of performance measurement systems

## Public Administration Drivers ( global survey)(4)

- Developments which will have greatest impact on public administration organisation
  - Rising citizen expectations
  - Technology innovation
  - Changing nature of demand for public services
  - Increased focus on governance and performance management
  - Declining availability of government funding
  - Increasing partnership and with / support from the private sector
  - Expansion of e government capabilities
  - Growing uncertainty in the political economic environment
  - Heavier regulatory / oversight burden
  - Greater insistence from community groups for accountability

## Public Administration Drivers ( global survey)(5)

- Public Administration critical priorities
  - Streamline and expand delivery channels with the help of technology (48%)
  - Invest in training to enhance employees citizen service skills
  - Re-engineer processes to become more cost efficient
  - Develop customisation capabilities
  - Involve citizen in the design of new services channels
  - Invest in automated citizen relationship management capabilities
  - Adapt private sector customer service practices
  - Contract out more citizen-facing processes (15%)
  - Bring more citizen facing processes in house (14%)

## Public Administration Drivers

- Globally
  - IT, computerisation, and technology investment to deliver
    - Better services to citizens
    - Productivity improvements
    - Cost efficiency
    - Joined up government
    - Interoperability
    - Redundancy, resilience and disaster recovery
- Japan driver - U-Japan 2010 program - user centric -
- Korean driver – U- Korea, IT 8-3-9 strategy – services, infrastructures, new growth engines
- US driver – homeland security, economy
- EU driver
  - Citizens
  - SME's
  - Devolved administrations
  - Regional development agencies
  - European overlay



A society in which  
everyone can participate  
using ICT without regard for  
age or disability

## u-Japan Initiative

u = ubiquitous/universal



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## Public Administration Drivers - EU

- Significant conscious choice to devolve and distribute economic activity
- EU grants administered through (distributed) RDA's (11 in UK - 150 in 25 EU countries) – Objective 1, Objective 2 and Objective 3 as well as elements of FP6 / 7 R&D – 160+ ways to penetrate a larger market!
- Large central government IT projects running into difficulties across the board – lack of IT flexibility is a barrier to adaptability
  - National health IT - £6bn - £18bn
  - ID systems
  - Police and criminal justice
  - Migrations / border control
  - Natural disasters, pandemic and terrorisms
  - E-learning and health
  - Tax credits
- Grid allows resource sharing on projects going awry – reduces risks

## Public Administration Drivers - UK

- Large
  - state dependency - C 40% dependant on social/state programs (24m in UK)
  - illiteracy 20%? (6m in UK)
  - public administration employee base - 10 + % of population deliver public service ( government and NDPB's and Quango's) (6m people)
  - digital divide
  - social exclusion
  - underclass / deprived wards
  - economically inactive segment
- Yet services mainly targeted at those the wrong side of the divides!
- Replicated internationally
- Tiered international, national, regional, local administrative structures
- Public admin wants to improve service delivery but huge number unable to participate
  
- Larger than most if not all current grid projects
- How can grid assist adoption and engagement?

## Public administration tasks

- Targeted delivery of public service – right service, right place, right time,
- Service transformation
- Business process improvement
- Data management
  - Data mining
  - Data presentation
- Communications management – two way
- Commerce – procurement and citizen payment – Micropayments
- Integrated infrastructure management (inventory to traffic to energy)
- Security
- Resource management
- Adaptability
- Continual learning
  
- The tasks are not computationally difficult
- The challenges are scale and pace of change
- Challenges of past have been structural rigidity

## Scale - NHS

- £96 bn budget
- 300 m consultations pa
- 1.3 m direct employees – c.f. 1 m UK pensioners not resident in UK
- 10 Strategic Health Authorities (SHA's)
  - 302 Primary Care Trusts (PCTs), which administer primary care and public health, which oversee England's
    - 29,000 GPs and
    - 18,000 NHS dentists.
    - In addition, they commission services from the private sector
  - 290 NHS Hospital Trusts organisations that administer hospitals, treatment centres and specialist care in
    - approx 1,600 NHS hospitals (many trusts maintain between 2 and 8 different hospital sites).
  - NHS Ambulance Services Trusts
  - NHS Care Trusts
  - NHS Mental Health Services Trusts
- Add Scotland, Wales and NI (+ 20% pops)

## Current Grid focus

- R&D / technology
- Large corporates – financial services, oil and gas, entertainment
- Exemplar projects / proof of concepts

but

- Public administration is focusing on
  - citizen focused,
  - locally delivered,
  - distributed administration,
  - devolved administration, and
  - SME's
- Plays into the Grid concept if one could organise it

## EU policy statement re SME's Nov '05

- Modern SME policy for growth and employment
  - Integrate “Think small first” into all EU policy.....in
    - Public procurement – Euro 1.6 trn or 16% of EU GDP
    - Standardisation
    - Intellectual property
    - Tax systems
  - Promote entrepreneurship
  - Promote take up of ICT, e-learning and e-business
  - Better participation in EU programs
  - Access to finance, R&D, Innovation, and ICT
  - Cutting red tape

## SME Scope Employees

	UK and EU
Micro	0-9
Small	10 - 49
Medium	50 - 249

Source FBS, DTI, EU

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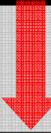
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## SME's in UK and EU context

	UK	EU
UK Private Enterprise	4m	23m
SME % of Private Enterprise	99%	99%
SME % Employees in private sector	58%	N/A
SME % of new jobs created	66%	N/A
SME % of UK's annual turnover (£1173bn)	52%	N/A
% with zero employees	70%	N/A
% Small	99%	N/A
% Medium	0.6% (26000)	N/A
% Large	0.1% (6000)	N/A

Source FBS, DTI, EU

## SME policy vectors

	
UK Regionalisation (11 business chances to previous 1)	Increased regulation ( being addressed)
Increased government spend e.g. £6.2 bn NHS program	
EU and UK support for small business	
Increased EU R&D	
Government policy re broadcasters ( 25% externally sourced)	
Converged regulator ensuring competition	
Decentralisation of industries e.g. media and entertainment, broadcasting, education, health trusts	
Convergence industry looking for differentiators	

## Positive policy impacting on SME's

	UK	EU
Government Spend	Budgets increasing at faster than inflation. Significant programs on health, education, R&D, law and order.	Budgets increasing at faster than inflation. Pan European international collaboration encouraged under FP6 program – UK SME's participants in this ecosystem
SME bias	Proactive government programs to encourage entrepreneurship and small business	“Think small business” as key policy component
Regional polices	Proactive regionalisation in education, health, media and entertainment, broadband industrial development	Proactive Regional Funds (Objective 1, 2 and 3) to support development of new industries and overcome digital divide in Europe's remoter regions e.g. Cornwall / Scotland
Industry Decentralisation	Proactive policies to decentralise certain industries to other areas e.g. Taxation, broadcast studios, health call centres to outlying regions	
R&D polices	Specific R&D programs in Broadcasting, Computer Games, Digital Content, E-Communications, Electronics, Information Security, Publishing, Software and Computer Services, Telecoms	Large Pan European Program in convergence industries as FP6

## Public Administration lack of appeal to citizens and SME's

- Public Administration targeted at citizens and SME's yet
- SME markets (23m across Europe) remain
  - largely cash-based,
  - unsupported and unenthused by accountancy, e-tax and e-business
  - make solutions relevant, accessible and value generating to SME's, citizens and consumers
  - acid test..... ***people to invest in e-business solutions rather than a new car!***
- 40+% of citizens the same
- Invest in deskilled technology so that EU does not have to invest in technology literacy which is mainly about how to use extra-EU technology
- Invest in concurrency for load balancing
- let the competitive advantage be “ease of use” and “relevant solutions”
  - Doesn't need to be complex

# Infotainment Market Transformation – citizen in charge

Drivers	Effect
Power of brand	Brand provides value and trust
Consumers in charge	New tools enable consumer power
Consumers as creators and editors	The personalised studio at the edge
Behavioural and demographic changes	Behaviour and demographics change
Bandwidth via.....	Capacity and range of options increases incl meshed high capacity wireless
Distribution is king	Increasing options changes dynamics
Web wave 2	New Internet technologies
Evolution of advertising	Personalised and interactive

Source Gartner

## Citizens and public administrators to use the 6 screens of life

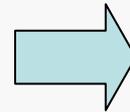
- Big
  - Cinema ( shared with other members of the public)
  - TV ( shared privately within homes)
  - PC (personal or shared use)
- Small
  - Fixed portable players ( fixed devices in things that move e.g. cars, planes)
  - Information screens e.g. iPod, radio
  - Mobile communicator ( an individual and personalised handheld device)
- Or fixed, carried and carry screens

## Devices proliferate

- Home sensors / controller
- Vehicle sensors / controllers
- Personal devices
- Public administration sensors / controllers
- Business sensors / controllers
- Near field communication (NFC)
- Radio Frequency Identification ( RFID)
  
- All are public administration devices / challenges
  
- Leading to a management challenge – Grid?

## From infotainment to consumer generated content

- Video games
- Radio
- Recorded music
- TV distribution
- Broadcast / cable networks
- Filmed Entertainment
- Newspapers
- Consumer books
- Magazines
- Internet Access



- Consumer generated content
- Social networking services
- Community networks
- IPTV
- Mobility
- Blogs
- Vlogs
- Mobile Web 2
- Context
- Foraging
- Identity / trust
- Recommendations



Software

## The community as the editor and watchdog of public administration

- Digg [www.digg.com](http://www.digg.com) – technology news website – more diggs – higher the ranking – bookmarking, blogging, RSS
- Youtube [www.youtube.com](http://www.youtube.com) – original videos worldwide – upload, tag, share, rate
- Citizen journalism [www.ohmynews.com](http://www.ohmynews.com)
- Image sharing [www.flickr.com](http://www.flickr.com)

## Going “web side” - philosophies

- No single business model – maybe it doesn't matter
- A world of video-based content
- Uncertainty regarding how will it monetize
- Markets, businesses and processes have fuzzy edges
- More mashed content (together) including user generated content
- More movement, flux, in build customer experience
- Off shoring is yesterday's view of the world
- Globalisation is today - draw capabilities from all over the planet
- Going web side – don't build firewalls – put all capability on new infrastructure
- How to deal with knowing uncertainty / identity
- How build and ensure sustainability
- Rethink monetization models
- Personalised, location, context and mobile based services
- Communities and social networking services
- Overcoming digital divides

## Web 2.0 principles

Web 2.0	Mobile Web 2.0 (restricted device)
<ul style="list-style-type: none"> <li>•The web as a platform</li> <li>•Harnessing collective intelligence</li> <li>•Data is the next Intel inside</li> <li>•End of the software release cycle</li> <li>•Lightweight programming models</li> <li>•Software above the level of a single device – software as a service</li> <li>•Rich user experiences</li> </ul>	<ul style="list-style-type: none"> <li>•Content created on the mobile device will change the balance of power in the media industry</li> <li>•I am a tag, I am not a number</li> <li>•Multilingual mobile access will be critical</li> <li>•Mobile web 2.0 will drive digital convergence</li> <li>•Ajax is a disruptive force within Mobile Web 2.0</li> <li>•Mobile web 2.0 will drive location-based services</li> <li>•Mobile web 2.0 will drive mobile search</li> </ul>

**These are public administration drivers**

**Supporting Maslow's needs and motivations**

**Network is the computer**

Source Tim O'Reilly, Global Village, Futuretext

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**Ajax – asynchronous communications, JavaScript and XML**

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## Rapid adoption of broadband and mobile services is fuelling applications development

- The key drivers and enablers for growth of applications and services are:
  - Search ( unstructured, structured, chatter, tags, data)
  - Personalisation
  - Security
  - Payment Systems
  - DRM
  - Media Literacy
  - Authentication
  - Rights and licensing framework
- These are all drivers and enablers which benefit from low cost and are in abundance in Public Administration
- Need redundancy, resilience and disaster recovery

## Web to Grid

- Web
  - Sharing **information** between geographically separated computers
  - Business going “web side” and placing all resources on web
- Grid
  - Sharing **resources** between geographically separated computers
    - Processing power, data storage, instruments
  - **Simplified access** ( *simple portal to complex resource system*)
  - **Pervasive access** ( *accessible from any geographic location*)
  - **On demand computing** ( *efficiently allocated, optimised resource access*)
  - **Large Scale resources** ( *of a scale not economically viable at a single site*)
  - **Sharing of software and data** ( *in a secure, transparent way*)
- Comparison between Grids and Networks:
  - Networks realize **message exchange** between endpoints
  - Grids realize **services for users**  higher level of abstraction

Source M Doran

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## “Computing” - analysis Sept, Public Administration Projects

Project	Scope	Key tasks	Grid (able)
Local govnm't web sites	72% of web sites do not meet basic level of availability	Information and services	✓
Cross dept data sharing	Dept of work and pensions, tax, fraud	Cross departmental data sharing	✓
Police data sharing	National data sharing programme	Crisp to link 8 systems	✓
Covert operations management	Regulatory compliance	Standardise process, speedy approvals and authorization	✓
Local council CRM systems	Better citizen interface	Management end to end citizen engagement	✓
NHS IT program (£6bn - £18bn)	Wide ranging health transformation	Range from data mining to data sharing to telemedicine	✓
Education	E-learning	Transform education with IT	✓
Libraries	Digital archive	Create a new digital archive	✓
Inland Revenue	Online filing and computation incl credits	Transformation of processes	✓

## Grid – the benefits

- Improving operations
  - Increasing system capacity
  - Improving system scalability
  - Improving reliability and resilience
  - Improving ways to store and access data
- Increasing speed
  - Increasing speed of computations
  - Increasing speed of transactions
  - Improving the ability to develop new applications and services
- Reducing cost
  - Improving Return on Investment
  - Reducing cost of ownership
  - Improving the ease of system and/or data management

## Grid – the benefits (2)

- Adaptive infrastructure in meshed environments
- Need large computing power occasionally
- Offers distributed computing power
  - Network load balancing
  - High / peak demand scenarios
  - Traffic surges ( terrorist attacks)
- Offers public administration benefits
  - Under **normal** admin requirements
  - Under **exceptional** requirements
  - Matches and accommodates other infrastructure load imbalances e.g.
    - Benefits payment during holidays
    - Pandemic hospital beds
    - Electricity and power surges during major sporting events
    - Disasters during bank holiday traffic periods
    - Ebb and flow of people to EU holiday / second home / retirement places
    - Long term infrastructure planning

## Grid – the benefits (3)

- The power of the network
- Accommodates
  - Patterns of usage
  - Peak demands
  - Unusual patterns
  - Integrated infrastructure developments e.g.
    - Computing
    - Communications
    - Power
    - Traffic variability
    - People behaviour
    - Legal / Regulatory changes
  - Diffuses resource vulnerability under disaster planning scenarios
  - Delivers cost benefits
- Increases complexity

## How can Grid benefit business / *public administration*

- More efficient use of computing resources
  - Connect resource across your company into a single computing infrastructure (Intel testing new processors on “internal” Grids)
- Affordable, on-demand access to very large scale computing resources
  - Pay for access to massive computing resources when you need them ( Sun Microsystems offering \$1/CPU hour service)
- Enable collaboration between dispersed groups
  - Simple formulation of “Virtual Organizations”: Groups of users with similar needs allowing secure access o shared data, applications etc.

Source M Doran

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Thank you for your time and attention



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