



One-stop Shop E-government Solution for South-Korean Government Multi-ministry Virtual Employment-Welfare Plus Center System

Presented by Dr Sofia Meacham, Senior Lecturer in Computing, Bournemouth University

Co-authors: P.Pratichi Rath, Pritam Moharana, Keith Phalp, Min Sig Park

Research performed in collaboration with South Korean Government



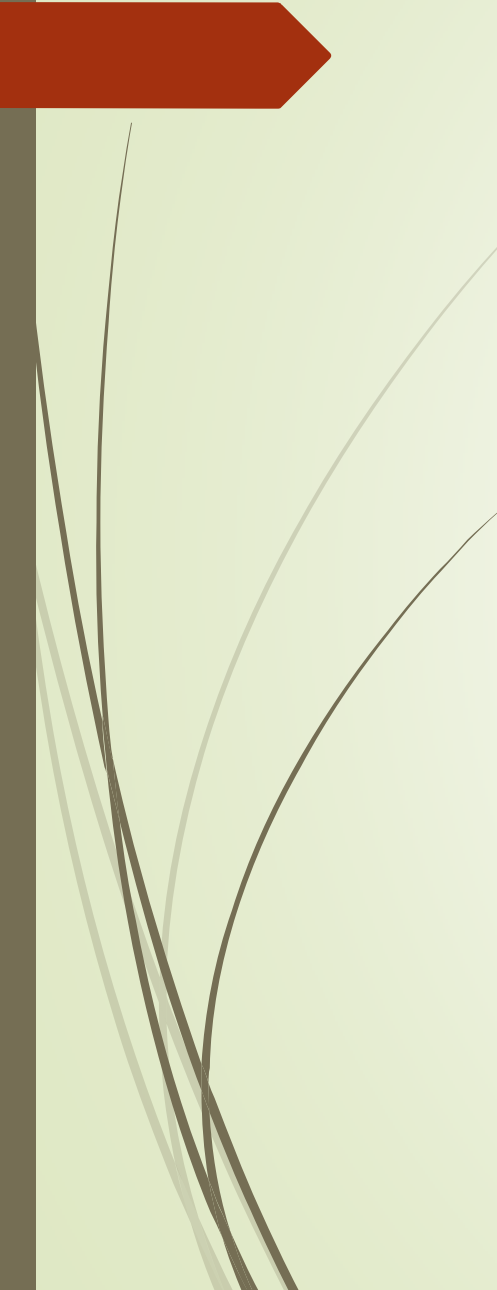
Introduction

- ▶ **Main purpose:** propose an e-government solution for South Korea's EWPC (Employment and Welfare plus Centre)
- ▶ Add IT integration to existing infrastructure
- ▶ Leading to Virtual one-stop shop EWPC solutions
- ▶ Proposed layered architecture



E-Government definition

- Governance with ICT
- Serving both the government and its citizens
- Two-way communication and influence



eGovernment evolution in South Korean government

- ▶ 2002 : Government 24 website
- ▶ Attempt to follow New Public Management (NPM) and Joined-up Government (JUG) organisation structure by integrating multiple ministerial departments to provide a single platform
- ▶ Need for Virtual Organisation and one-stop shop solution approaches



Our proposal

- ▶ Conceptual model of the VO
- ▶ Three layers hybrid architecture:
 - ▶ Layer one: the customer
 - ▶ Layer two: local welfare service centres
 - ▶ Layer three: virtual environment of the ICT infrastructure with integration of e-Governance policy



Current status

- ▶ EWPC is the evolution of the integration of several ministries through Government 24 website
- ▶ Handles employment and welfare services that have been carried out autonomously in various institutions.



Cloud Infrastructure

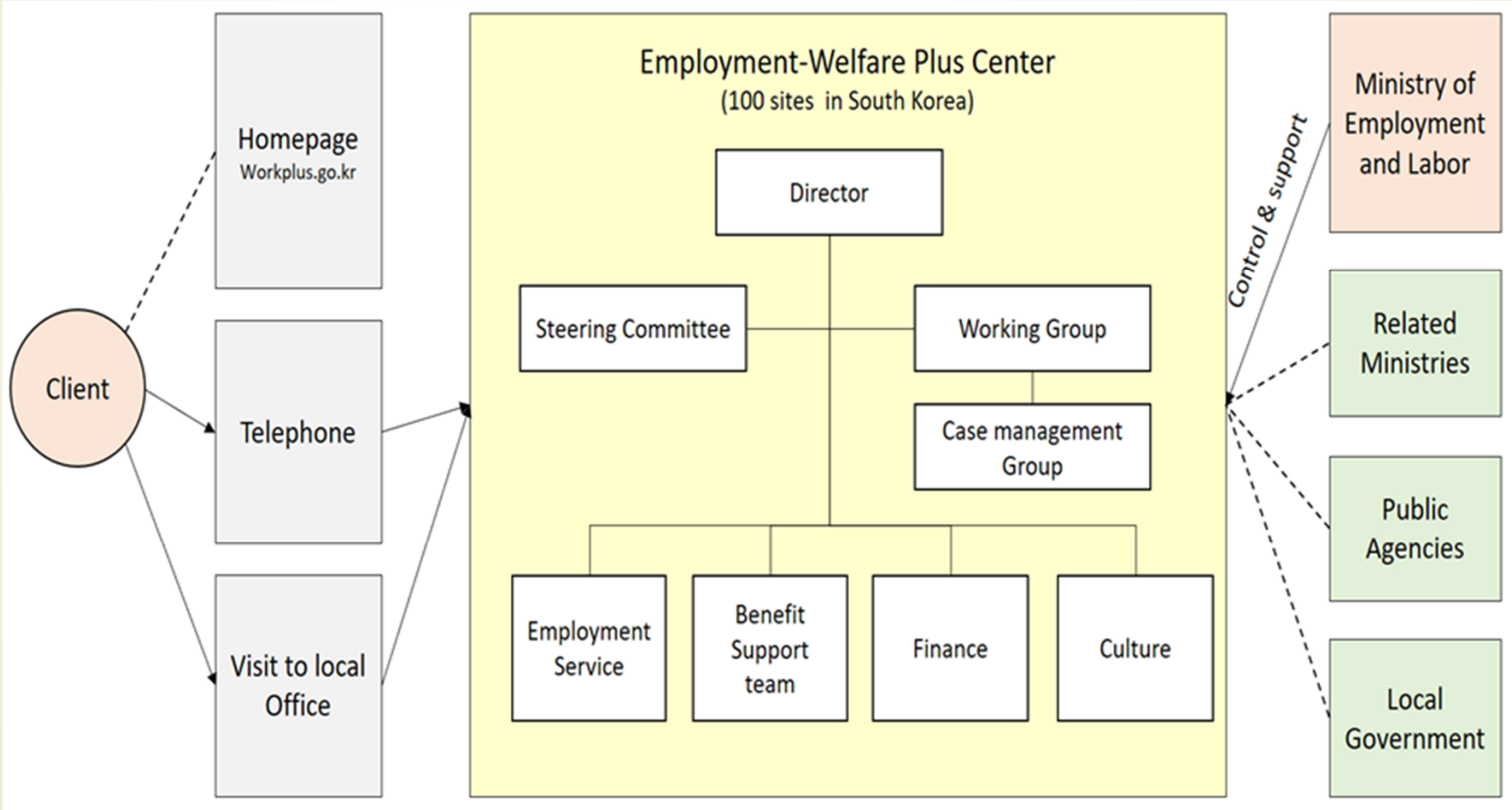
- ▶ Government 24 uses a cloud-based Government Integrated Data Centres (GIDC)
- ▶ This cloud system has proprietary government-private cloud services
- ▶ Comprises of 20000 information systems from 44 ministries
- ▶ Unfortunately, we didn't have any access to these IT infrastructures due to confidentiality and proprietary issues from the South Korea government



Success of EWPC

- ▶ No. 1 in the E-Government Development Index (EGD) and E-Participation Index in the United Nations Global E-Government Survey for 2010, 2012 and 2014 [6]
- ▶ Introduced in developing countries [2]

EWPC – existing situation

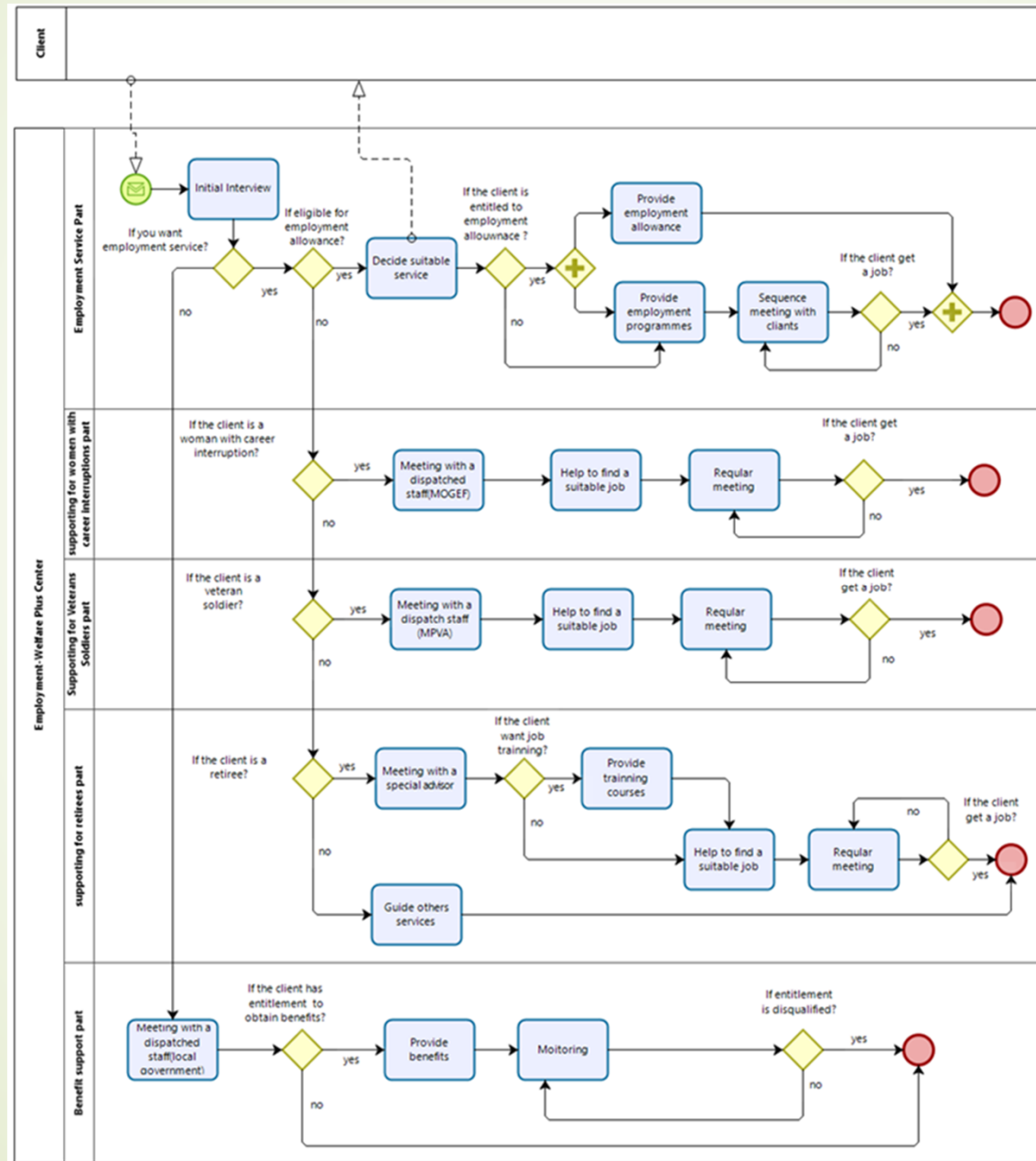




Types of services

- Employment services
- Training services
- Women with career break
- Services for veteran soldiers
- Benefit support services
- Finance support services

Business Process





Problem areas in EWPC – Comparison with UK

The below is the summary of the main problem areas in the current South Korea Welfare System:

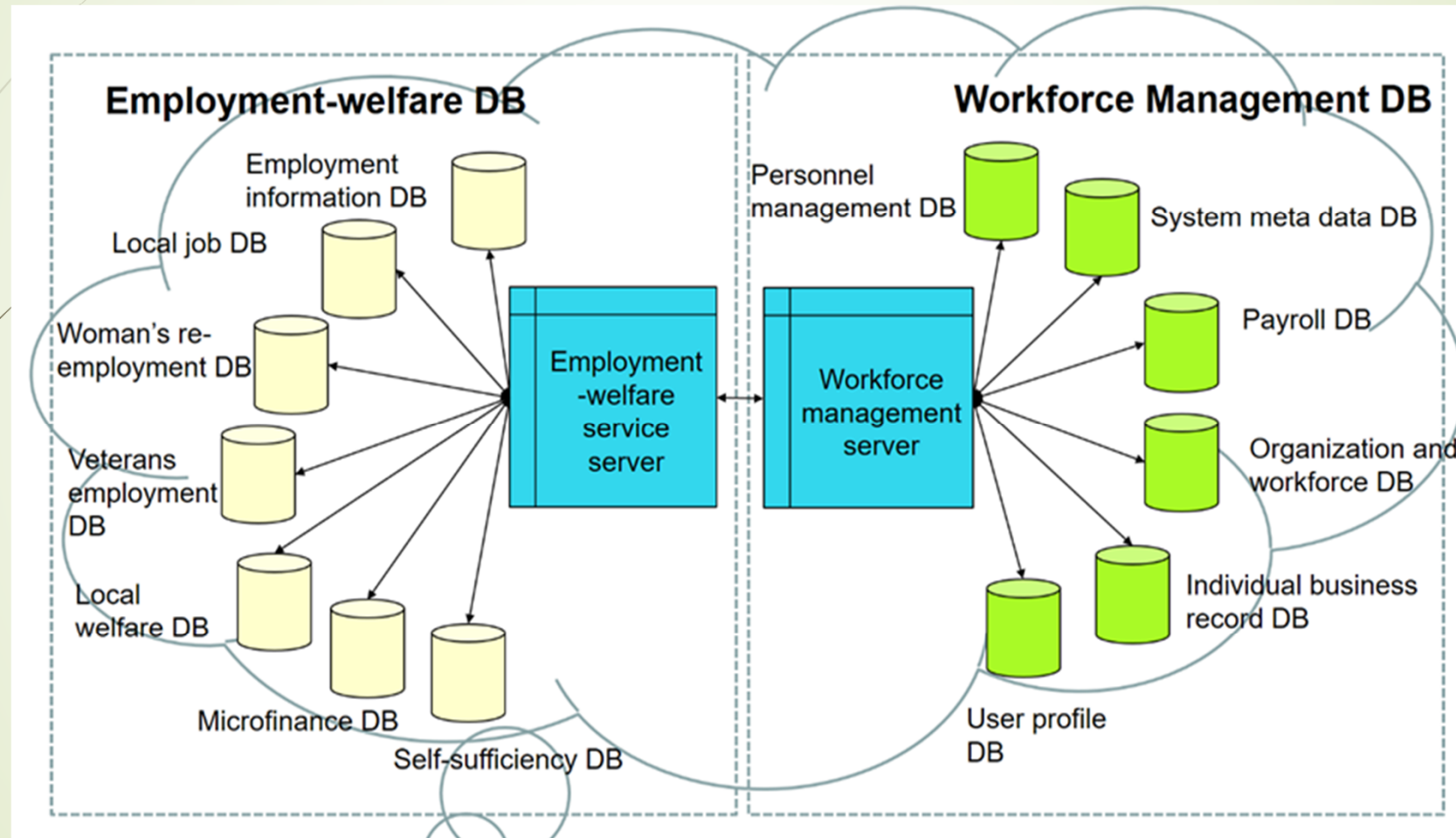
- ▶ lack of connectivity between national strategies
- ▶ single gateway does not fully integrate to online service level
- ▶ workforce management using information management is not available
- ▶ no one-stop shop for employment welfare services
- ▶ no linkage or integration with government 24, the government gateway
- ▶ a high proportion of manual work processes
- ▶ no visibility on the performance



Survey results from supervisors and employees

- Surveys have been conducted that came up with the same conclusions as just stated.
- Integration of multiple ministries and interoperation through a Virtual Organization structure and a true one-stop shop solution would significantly improved the efficiency of the processes and the overall services offered to the citizens.

Virtual EWPC requirements – integration of infrastructure



SysML Block Definition Diagram for VEWPC

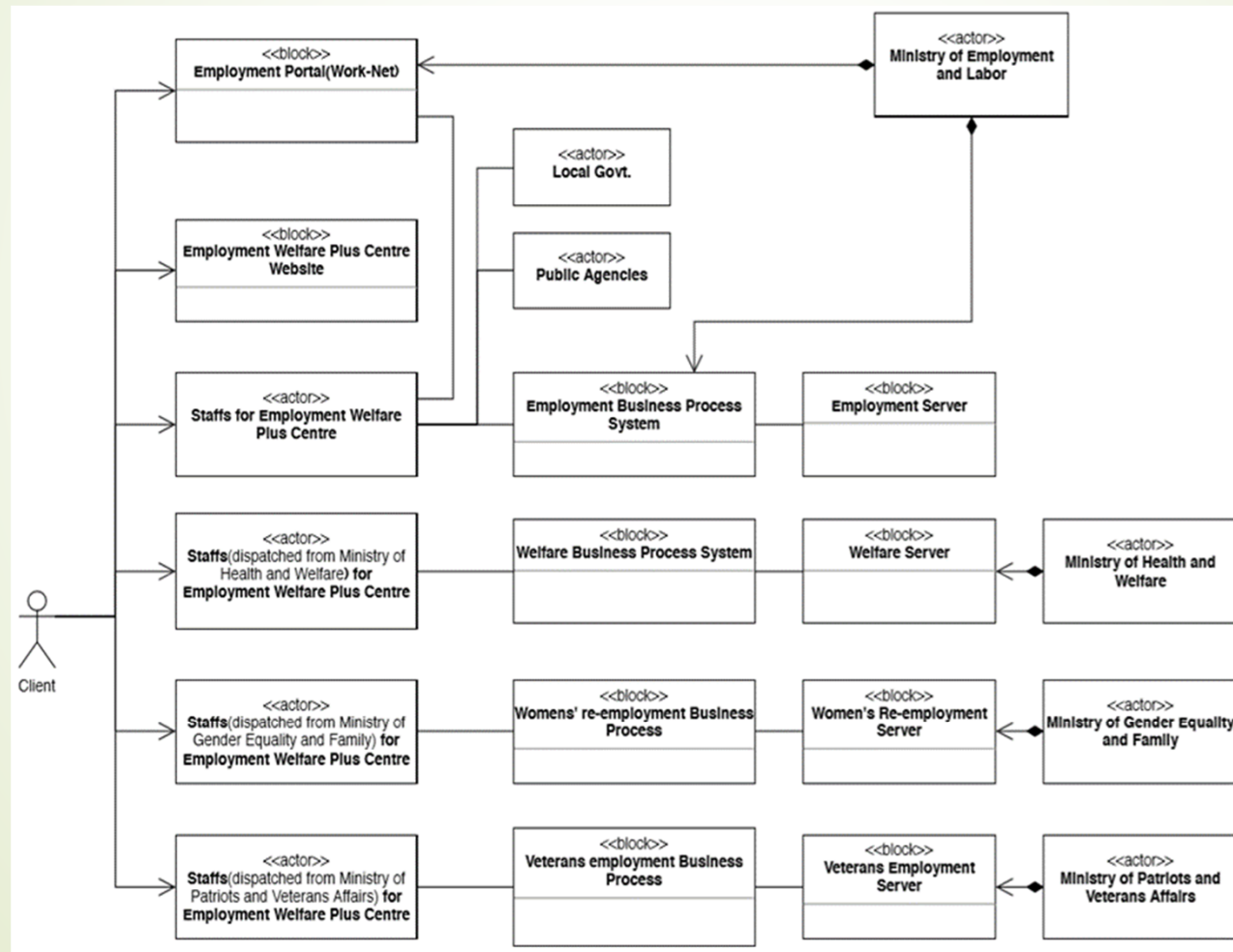


Figure 4: Conceptual Architecture of one-stop shop

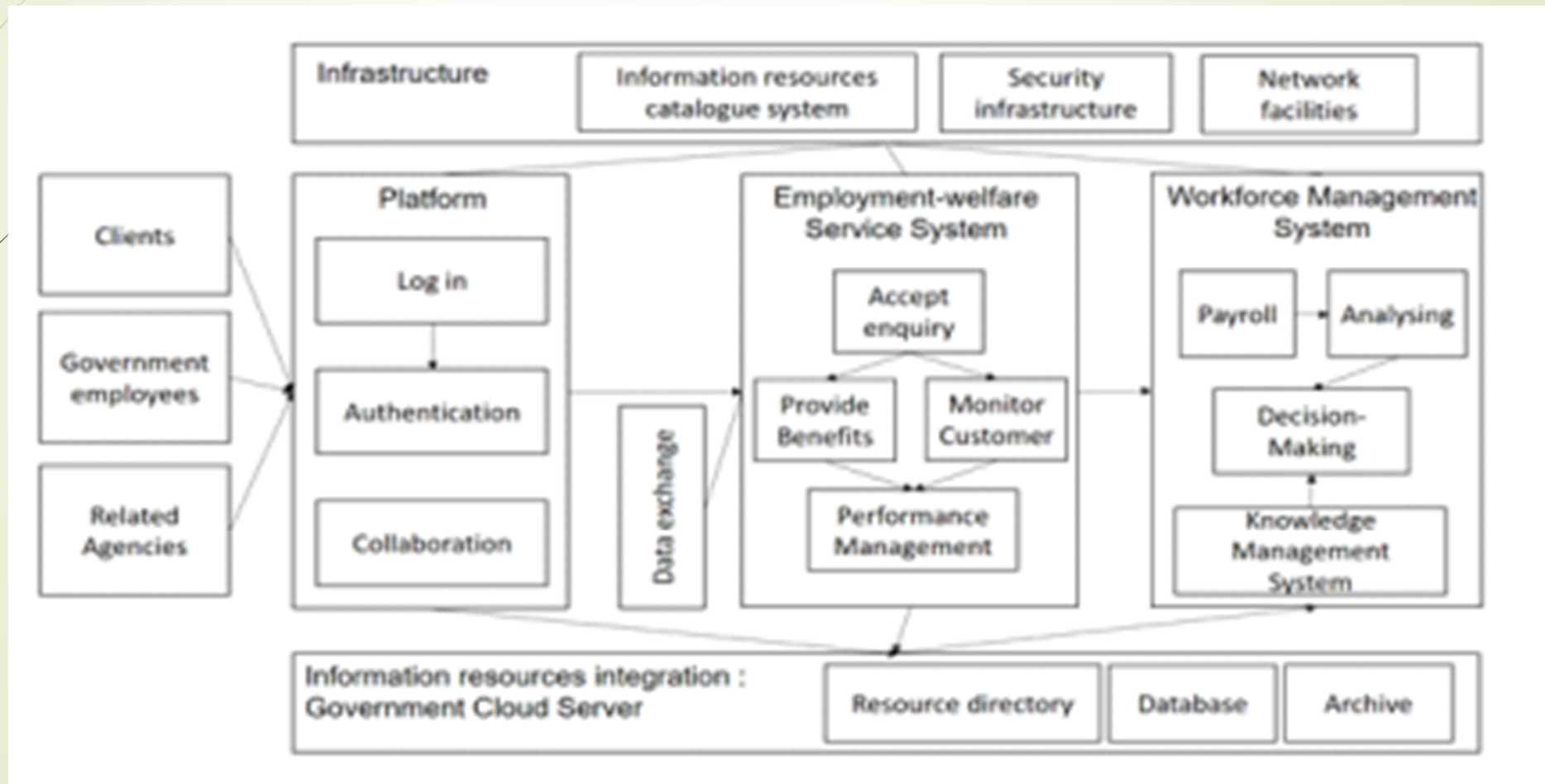


Figure 5: The Architecture of one-stop shop

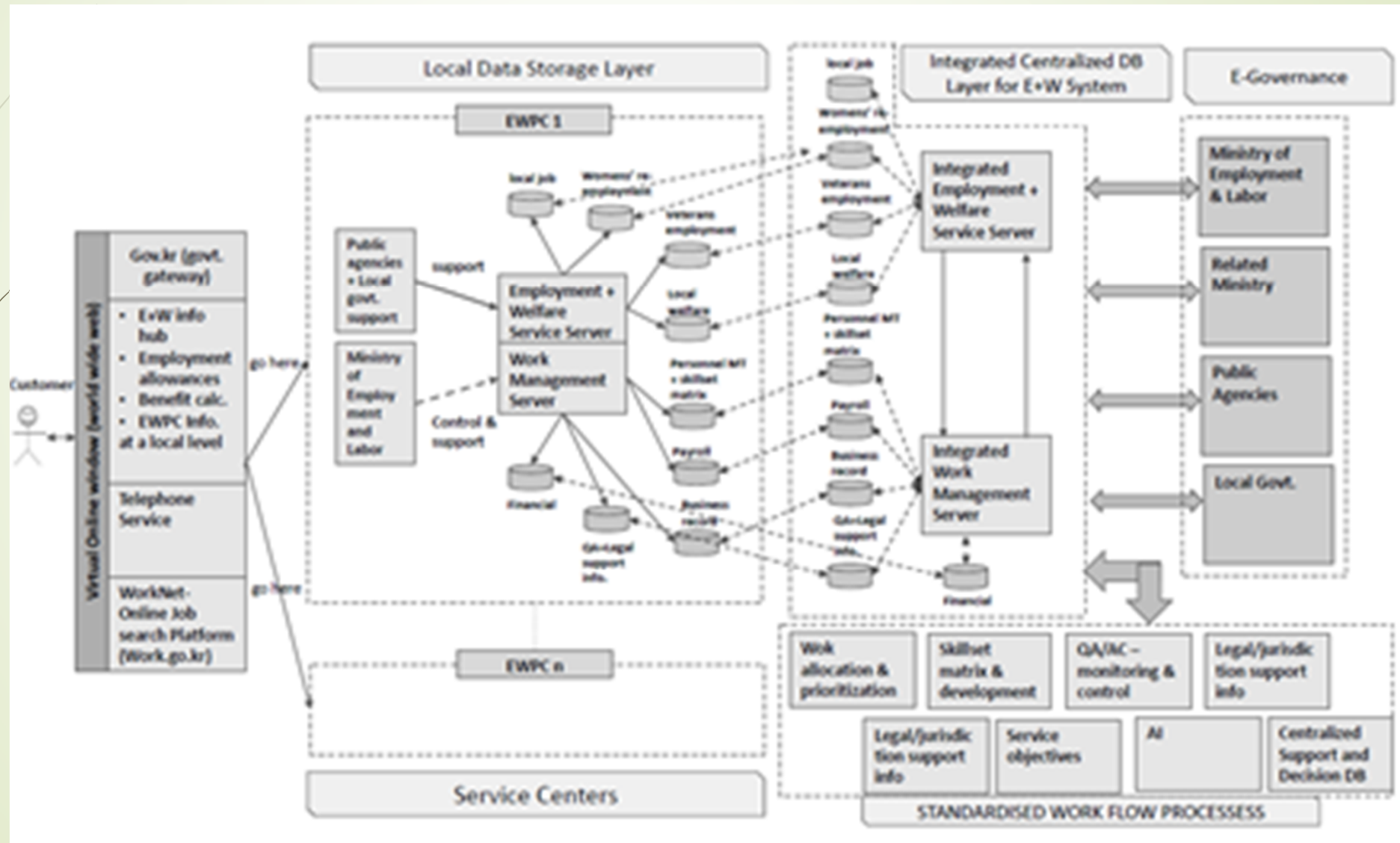
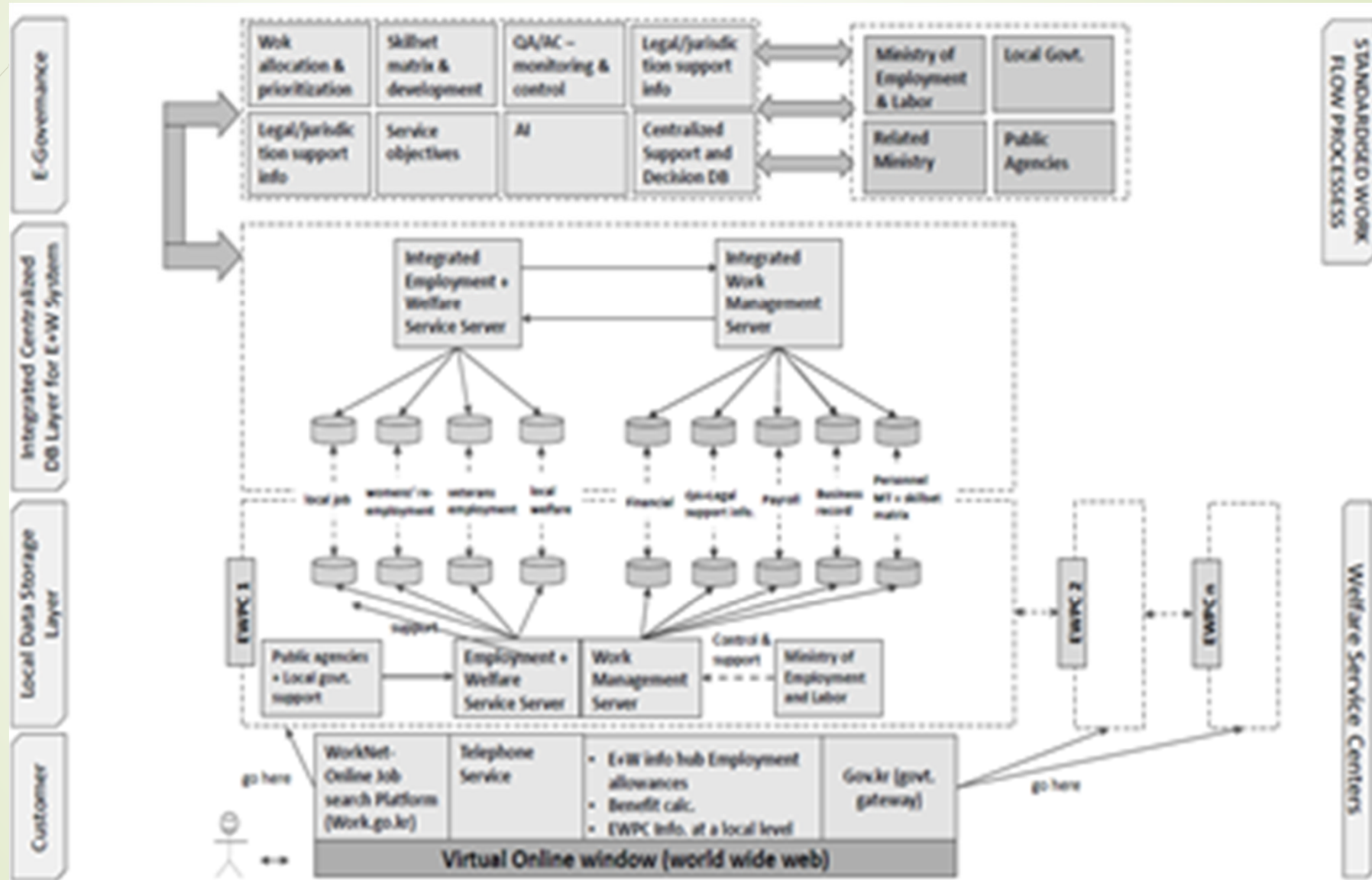


Figure 6: Intention-Based Design for one-stop shop Conceptual Architecture





Our proposal – Three layers Architecture

- ▶ Conceptual model of the VO
- ▶ Three layers architecture:
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Evaluation of the proposed approach

- ▶ This optimizes the overall decision-making process by assigning to the local resources for data processing and storage, while, the complex decision making, involving multi-ministerial policies and related influences is handled by the centralized e-Governance layer.
- ▶ The work was evaluated through feedback from Korea Government as was submitted to the Ministry of Interior and Design for evaluation as the outcome of the collaborative project with Bournemouth University. According to this feedback the virtual organization approach of the proposed architecture **would add a major advantage to the existing structure**. It would provide a simplified and faster model of decision making led by an integrated & centralized e-Governance policy platform (VO solution).



Conclusions-Future Plans

- ▶ Model-based description that includes the solution and the business processes using:
 - ▶ SysML, Archimate
- ▶ Detailed cost-analysis
- ▶ Continuous collaboration with South Korean Government
- ▶ Future of this idea's applicability: South Korea Government decision
- ▶ Applicability of ideas to other industries such as British Telecom



For Questions please email

smeacham@bournemouth.ac.uk