How Government is Transforming with AI?

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CEO
Digital Government Development Agency
/Public Organization/
Government Integration
Integrate government agencies for both data and operation in order to
• See public information as a complete picture
• Share technologies
• Provide complete one-stop service for government services

Smart Operations
Utilize technology and digital devices to support operation with appropriate digital technologies
• Connected devices
• Big Data management
• Analytic tools

Driven Transformation
Drive transformation to Digital Government in every level of government employees, including organizational transformation in work procedures, technologies and regulations

Citizen-centric Services
Improve government services to address constant changes of public needs by balancing security of lives, assets and public data while facilitating users.

Enhance Thai Government to become Digital Government with Integration, Smart Operations, Citizen-centric Services and Driven Transformation

Vision of Digital Government
### Improving Government Efficiency

- **Finance**
- **Procurement**
- **Asset Management**
- **Human Resource and Payroll**

### Data Integration

- **Data Integration**
- **Data Authentication and Verification**
- **Information**
- **Feedback**
- **Digital Government Infrastructure**
- **Digital Government Capacity Building**

### Project Development

- **Government Integration**
  - Integrating data and operation among agencies
- **Smart Operations**
  - Using technology and digital devices to support operation with suitable technology usage
- **Citizen-centric Services**
  - Improving Government services to serve changing public demand
- **Driven Transformation**
  - Driving transformation to Digital Government in every level of Government officers

### Elevating Citizen’s Quality of Life

- **Public Welfare**
- **Labour**
- **Education**
- **Health**

### Enhancing the Capacity of the Business Sector’s Competitiveness

- **Agriculture**
- **Tourism**
- **Investment**
- **Trade (Imports & Exports)**
- **SMEs**
- **Tax and Revenue**
- **Transportation**
- **Public Utility**

### Increasing National Security and Public Safety

- **Public Safety**
- **Border Management**
- **Natural Disaster**
- **Crisis Management**

### Developing the Capacity to Support Government Services

- **Finance**
- **Asset Management**
- **Human Resource and Payroll**

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*Relevant laws, regulation and measure amendment is operated under Strategy 6 of Thailand Digital Economy and Society Development Plan.*
Strategic Technology Trends for Digital Government

Virtual Reality / Augmented Reality
Application of Virtual Reality (VR) and Augmented Reality (AR) technologies in simulating environment or situations for the purpose of public safety management, telemedicine, and new formats of education and tourism.

Advanced Geographic Information System
Application of Advanced Geographic Information System technology in geographical data management, as well as its applications in management of agricultural resources, transportation system and other areas.

Big Data
Processing big data and make forecasts and estimations in business environment, using Internet of Things (IoT) and Smart Machine technologies to perform real time analysis and responses with users.

Open Any Data
Disclose informative data to users through refurbishment of database and website to allow wider public access and promote linkage of those disclosed data with other entities.

Smart Machine / Artificial Intelligence
Application of Smart Machine technology to enable management and responses of automated services - the Smart Machine system will gradually evolve and consequently be able to evaluate and address problems throughout the service supply chain.

Cloud Computing
Application of Cloud Computing technology for data storage to reduce complication in system installation, reduce system maintenance cost, and save network establishment investment.

Cyber Security
Addressing cyber security issues by setting cyber security standards, revising related regulations to make them more updated and flexible, as well as reforming the mindsets in handling cyber security issues.

Internet of Things
Using the Internet of Things (IoT) technology to facilitate the transformation of government services into digital formats, and at the same time, the IoT technology can also support government’s works in communication, utilization of mobile technology, analyzing big data, and cooperation with private business sector.

Block Chain / Distributed Ledger Technology
Application of Block Chain technology in data storage and utilization of the network for the purpose of verification and reduction of intermediaries under reliable security environment.

Source: Focus group for drafting the Thailand’s Digital Government Technology Roadmap, in cooperation with the APEC Center for Technology Foresight under the auspices of the National Science Technology and Innovation Policy Office (STI), Ministry of Science.
How can AI Enhance Government Efficiency?

Key Functions replaced by AI

- Opening email and attachments
- Logging into web/enterprise applications
- Reading and writing to databases
- Copying and pasting
- Filling in forms
- Moving files and folders
- Collecting social media statistics
- Extracting structured data from documents
- Connecting to system APIs
- Scraping data from the web
- Following if/then decisions/rules
- Making calculations

Source: Deloitte analysis.
How can AI Enhance Government Efficiency?

Benefits of Cognitive Insight Applications

- More accurate prediction
- Improved resource allocation
- Anomaly detection
- Better decision making
- Real-time tracking
- Increased effectiveness

Pain point relieved
- Manual pattern recognition
- Missing on key patterns

Source: Deloitte analysis.
Benefits of Engagement Applications

- Higher citizen engagement
- Higher accuracy rate
- 24X7 support
- Responsiveness (answers immediately)
- Multilingual
- Cost savings
- Increased focus on mission-critical tasks

Pain points relieved:
- Long wait times for citizens
- Human resource constraints
- Budget constraints

Source: Deloitte analysis.
# One Stop Service 4.0

<table>
<thead>
<tr>
<th>Location</th>
<th>Form</th>
<th>Copy of docs</th>
<th>Data Linkage</th>
<th>Approval</th>
<th>Authentication</th>
<th>License</th>
<th>Payment</th>
<th>Delivery</th>
<th>Platform</th>
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</thead>
<tbody>
<tr>
<td>OSS 4.0</td>
<td>Virtual</td>
<td>e-Form</td>
<td>Image File</td>
<td>มีบางข้อมูล</td>
<td>e-Signature</td>
<td>e-Authentication</td>
<td>e-Payment</td>
<td>e-mail</td>
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<td>รายงาน</td>
<td>ไม่มี</td>
<td>ลงนาม ปากกา</td>
<td>นางอ</td>
<td>รายงาน</td>
<td>เลื่อนสด</td>
<td>ทำหาร่าง_FILE / ไปรษณีย์</td>
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<td>นางอ</td>
<td>รายงาน</td>
<td>เลื่อนสด</td>
<td>Web มี บริการ บางส่วน</td>
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<td>OSS 1.0</td>
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<td>ลงนาม ปากกา</td>
<td>นางอ</td>
<td>รายงาน</td>
<td>เลื่อนสด</td>
<td>รวมสิ่ง Portal</td>
</tr>
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</table>
Example of using AI for Government Service

<table>
<thead>
<tr>
<th>Digital ID</th>
<th>AN ID FOR ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Digital ID</td>
<td></td>
</tr>
</tbody>
</table>

**Login Information**
- **Username**: [Input Username]
- **Password**: [Input Password]

**Services**
- Photo
- Photo with Smile
- Authentication And Authorize Request

**Registered Services**

![Digital ID and Authentication Interface](image_url)
Bias

Liability

Human rights group claims the algorithms threaten a ‘tech veneer to biased practices’
EU’s (Draft) Ethics Guidelines for Trustworthy AI

1. Accountability
2. Data Governance
3. Design for All
4. Governance of AI Autonomy (Human oversight)
5. Non-Discrimination
6. Respect for (& Enhancement of) Human Autonomy
7. Respect for Privacy
8. Robustness
9. Safety
10. Transparency

Ethical AI Systems Design by World Government Summit in partnership with Deloitte

- AI systems have to be explainable
- AI systems have to be transparent
- AI systems have to be designed on human-first design principles
- AI systems have to be interpretable
- AI systems have to be designed on common-sense principles
- AI systems have to be auditable-accountable

Ethics and AI Adoption in the Public Sector
No universal consensus is made on how an ethical AI be recognized. However, common features of AI ethics can be highlighted as follows:

- **Transparency**
- **Accountability**
- **Privacy**
- **Human-first Rules**
- **Non-discrimination**
EGA worked with all government agencies to place their government data on www.data.go.th in an open format and free of charge.

EGA published online and offline versions of a guideline for Open Data.

EGA published its first Open Data Strategy in 2015 with 8 core principles.

The “Licensing Facilitation Act, B.E. 2558 (2015)” specific government agency open information services.

EGA initiated Thailand Government Spending Project which is an implementation of data set by the Comptroller general’s Department.

Hosted public events on International Open Data Day for 2 consecutive years to promote open data awareness.

Hosted Open Data Hackathon Event and a Cross-Country Hackathon between Thailand, Taiwan, and Indonesia.

MEGA, the project was organized to promote and support the development of mobile apps available in the public sector, private sector and academia to use e-government services and promote the use of government services.

High Value datasets are available on www.data.go.th.

1197 datasets on www.data.go.th, as of 22th October 2018.
Digital Government needs Data Governance

**Data issues/solutions**

- Completeness & Keeping Process
- Consistency
- Accuracy & Timeliness
- Availability
- Request Data Process
- Right to Access Data
- Discover
- Relevancy & Variety Format
- Use
- Data Integration
- Completeness & Keeping Process
- Policy & Standard
- Privacy & Compliance
- Role & Responsibility
- Process
- Guideline

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**Data Governance Framework**

Released in May 2018

![Data Governance Framework image]
Data Governance Principle is included in the newly approved “Digital Government Act”
What are we going to do with DATA?

Data Governance Framework

Data Governance Promotion Center

Open Data

Infrastructure

Data Analytics Capability

Subcommittee on the Digital Government Development of Open Data
Data Driven for Thailand 4.0 – Big Data Agenda

- Service (Food, Tourism …)
- Health
- Labour, Machine, Cost
- Transport & Logistic
- Agricultures
- Disaster and Prevention
- Infrastructure
- Poverty
- Agricultures
- Education & Labour
- Tourism & Transport
- Health
- Water Management
- Waste Management
- Energy Management
• Initiative consultative and inclusive process that will open up high value datasets from across government ministries
• Data Governance Framework Implementation
• Initiate Open Data Sharing Platform

• Community Development
• Pilot projects to innovate new products and services
• Publish more High Value Datasets in the 6 Domains
อีกกว่าหนึ่งของการส่งมั่นใจไปสู่ความเป็นเลิศด้านการบริการข้อมูลเปิดของหน่วยงานภาครัฐในรูปแบบ APIs

สมัครเป็นผู้ใช้

{ REST }

สมัครเป็นผู้ใช้ APIs

เดิม APIs

เพิ่มรูปแบบทรัพยากรต่อไปในอนาคต

เขียนคำสั่ง

เรียกใช้งานจากรูปแบบที่ต่าง
“AI for Government Administration and Services”
Due in May 2019
Thank you

Contact Us

www.dga.or.th

contact@dga.or.th

https://twitter.com/DGANews

https://www.facebook.com/DGAThailand

https://www.youtube.com/user/eGovernmentAgency