

# **UKRAINE IN THE CONTEXT OF GLOBAL AND NATIONAL MODERN SERVISATION PROCESSES AND DIGITAL ECONOMY**

***Monograph***

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## **II. RELEVANT ISSUES OF DIGITALIZATION AND SERVISATION PROCESSES INFLUENCE ON ECONOMIC PERFORMANCE**

### **7. The impact of servation on the results of economic digital entrepreneurship activities**

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**Introduction.** Main focus today: optimizing IT for successful digital transformation, cybersecurity, privacy. GDPR: enhanced personal privacy rights, increased duty for protecting data, significant penalties for non-compliance. Under the influence of new Internet technologies and online platforms, the global economy will gradually “get free” from the numerous barriers that divide it and will be characterized by a special “spatial plasticity” designed for the dynamics of communications and the driving force of innovation. Already today we observe both the economies of different countries inherent clustering, direct connection between economic participants; collective way of responding; hyperminous institutional environment. Digitalization of the economy, which is actively taking place today in Ukraine, to some extent “touched” all spheres of business. Its actors, aimed at long-term success and development, are forced to accept the challenges of

the modern economy – only way they can become leaders in business. Digital transformation and servation of economic activity at the micro level can help them.

**Literature review.** Knowledge of the new and role of entrepreneur in economic development we meet in scientific legacy of A. Granberg, P. Drucker [1], F. Kene, B. Karlof, P. Linholm, J. S. Mill, I. Maier, A. Smith, B. Santo, J. B. Sei, Sh. Tatsuno, K. Frimen, J. Schumpeter. On the modern understanding of the processes of formation and development of innovative entrepreneurship made a powerful influence of the work of A. Barker, A. Greif, A. Denzau, L. Mizes, D. North, P. Sorokin, J. Havstid. In the field of institutional theory, Ukrainian scientists work very fruitfully, researching the formation of digital entrepreneurship and e-business taking into account the economic conditions and peculiarities that are characteristic of Ukraine. In the works of A. Burlutskyi [2], I. Britchenko [3], L. Boldyreva [4], V. Vyshnevskyi, A. Govorin [5], O. Holoborodko [6], Yu. Zaitsev, S. Ivashyna, O. Kryvoruchko [7], N. Kraus, K. Kraus [8–12], I. Malyi, O. Marchenko [13–14], O. Manzhura [15–17], B. Odaygailo and others, on the basis of application of interdisciplinary approach, conducts scientific search for geopolitical, historical, ethnic, moral, psychological and cultural factors of institutional transformation of traditional business into electronic and analyzed the role in this servation.

**Results.** Cloud services are key to today's its strategies. 1,181 different cloud services are used by enterprises on average. 61 % of cloud applications IT isn't aware of. 75 % of companies consider SaaS tools essentials to their business. 80 % of workers use non-sanctioned cloud apps. Cloud Access Security Brokers (CASBs) are defined by Gartner as: on-premises, or cloud-based security policy enforcement points, placed between cloud service consumers and cloud service providers to combine and interject enterprise security polices as the cloud-based resources are accessed. CASBs consolidate multiple types of security policy enforcement. Estimated to be the fastest growing security market. Top security project planned in the next 2 years. By 2020 85 % of large enterprises will use CASBs.

Elevate the security for all your cloud apps and services. A uniquely integrated CASB: Threat Signal Clustering (Microsoft Intelligent Security Graph), Security Analytics & Guidance (Microsoft Secure Score), Cloud Security Posture Management – IaaS (Azure Security Center), Unified Endpoint Management (Inture), Data Loss Prevention (Azure Information Protection), Identity & Access Management (Azure AD & Conditional Access), Endpoint Detection & Response (Windows Defender ATP).

Shadow its management lifecycle by Safely adopting cloud apps, namely:

1. Discover Shadow IT – Identify which apps are being used in your organization.

2. Identify the risk levels of your apps – Understand the risk associated with discovered apps, based on more than 70 risk factors including, Security factors, industry- and legal regulations.

3. Evaluate compliance – Evaluate whether the discovered apps meet the compliance standards of your organization against factors like GDPR or industry-relevant standards like HIPAA readiness.

4. Analyze usage – Understand the usage patterns and identify high risk volume users.

5. Manage cloud apps – Start managing cloud apps and leverage one of several governance actions such as Sanction, Unsanction, onboarding an app to AAD to leverage SSO, marking them for review or blocking them from your network.

6. Continuous monitoring – Be alerted when new, risky or high-volume apps are discovered in your environment for continuous monitoring and ongoing control over your cloud apps.

Discovery process is as follows:

1. Identify cloud apps and services:

- >16,000 cloud apps and services from catalog;
- Custom apps.

2. Understand usage patterns

- Traffic data Top users and IP addresses App categories;

- Machine-based investigation via native integration with Windows Defender ATP.

3. Understand the risk:

- Assessment across >70 risk factors;

- Regulatory certifications, compliance standards (e.g. GDPR), industry standards and best practices;

- Risk score calculation - can be customized based on the priorities of your organization.

4. Take control:

- Sanction or un-sanction apps;
- Onboard apps to Azure Active Directory;
- Block apps natively with Zscaler;
- C-level report & recommendations.

Cloud Discovery with Windows Defender ATP consists in:

- Discovery of cloud apps beyond the corporate network from any Windows 10 machine

- Single-click enablement
- Machine-based Discovery
- Deep dive investigation in Windows Defender ATP

Protect sensitive files in the cloud occurs as follows:

1. User uploads a sensitive file to a cloud app
2. A classification label is automatically applied to protect the file

3. User tries to share sensitive file with external users
4. External user is not able to access the file due to classification and protection

5. Admin receives event alerts

Contents of work of Unified Data Classification Service consists in: unified labelling with Microsoft Information Protection; 90 built-in, sensitive information types you can choose from; ability to configure custom sensitive information types (supports complex patterns with Regex, keywords and large dictionary).

Azure ad conditional access:

1. Controls: allow access, require MFA, limit access, deny access, force password reset;
2. Conditions: users, devices, location, apps.

Protection against cloud threats is as followed:

1. Malicious Insider. Protect against disgruntled employees before they cause damage
2. Malware. Detect malware in cloud storage as soon as it's uploaded
3. Ransomware. Identify ransomware using sophisticated behavioral analytics technology
4. Rogue Application. Identify rogue applications that access your data
5. Data exfiltration. Detect unusual flow of data outside of your organization
6. Compromised Accounts. Combat advanced attackers that leverage compromise user credentials

Malware Detection happens by:

- Scan cloud storage apps;
- Identify potentially risky files Powered by Microsoft Threat;
- Intelligence.

Automatic detection and revocation of risky 3rd party apps possible in case of: monitor cloud permissions authorized by your users; act on suspicious apps; automatically revoke apps to the entire org or specific users and groups.

Raising the issue of servation, which has a powerful impact on the results of economic activity of digital entrepreneurship, it is impossible not to mention the new European Regulation on protection of individuals in relation to the processing of their personal data, namely General Data Protection Regulation (GDPR), which is mandatory for the implementation and application of all European Union states in the legislation.

The GDPR principles are as follows:

- legitimacy, transparency, fairness;
- goal restrictions;
- minimization of data;
- accuracy;
- limited storage;
- integrity and confidentiality;
- accountability.

We are talking about the following data:

- name, gender, age, race;
- passport data, identification number;
- residence and location data;
- mobile phone number, e-mail;
- IP-address, cookies;
- payment card data;
- biometric data;
- medical information.

As part of the problem of our study, it is worth noting that personal data is any information relating to an individual by which it can be identified. As for understanding the content of the "individual" category, it is a person who can be identified directly or indirectly, in particular by linking to a specific identifier; e.g. name, identification number, passport data, location data, mobile numbers, payment cards, IP-addresses, e-mail, etc.

Grounds for legitimate processing of personal data are as follows:

- consent of the data subject to fulfill the contract;
- public service;
- legitimate interest;
- vital interest.

The reasons why Ukrainian digital business should meet the GDPR are as follows:

- extraterritorial principle of the regulation;
- targeting of clients from the EU;
- international commitments: association agreement with the EU;
- adaptation of the NPA to GDPR liability;
- counterparties from the EU.

In the context of digitalization of entrepreneurial activity, whose companies will be affected by the need to meet the GDPR will be with the following characteristics, namely:

- process, store, transmit personal data of entities from the EU;
- perform works, provide services to citizens or residents of European Union countries;
- have counterparties from the EU.

As for the existing experience of "high-profile attacks", they are as follows:

## 1. TICKETMASTER

- 23.06.2018 – attack on data of 40 000 clients;
- 27.06.2018 – notice, possible fine of 2 % or 10 million euros, looking that more.

## 2. DIXONS CARPHONE

- 06.2018 – attack on these risk for 5 million 900 thousand customers;
- possible fine – 4 % turnover, about 423 million pounds.

Violation of the requirements for the protection of personal data in the

world:

- FACEBOOK – data transfer to Cambridge Analytica;
- YOUTUBE – collection of information about children without their parents' consent;

- UBER – 20 million people were injured.

Illegal data transmission in Ukraine:

- banks – sale of customer data;
- postal services – 18 million customers;
- carriers – constant transfer of data to third parties;
- Online stores – data transfer to third parties, further blackmail of the client.

The world's GDPR avoidance options are available in table 8.

*Table 8*

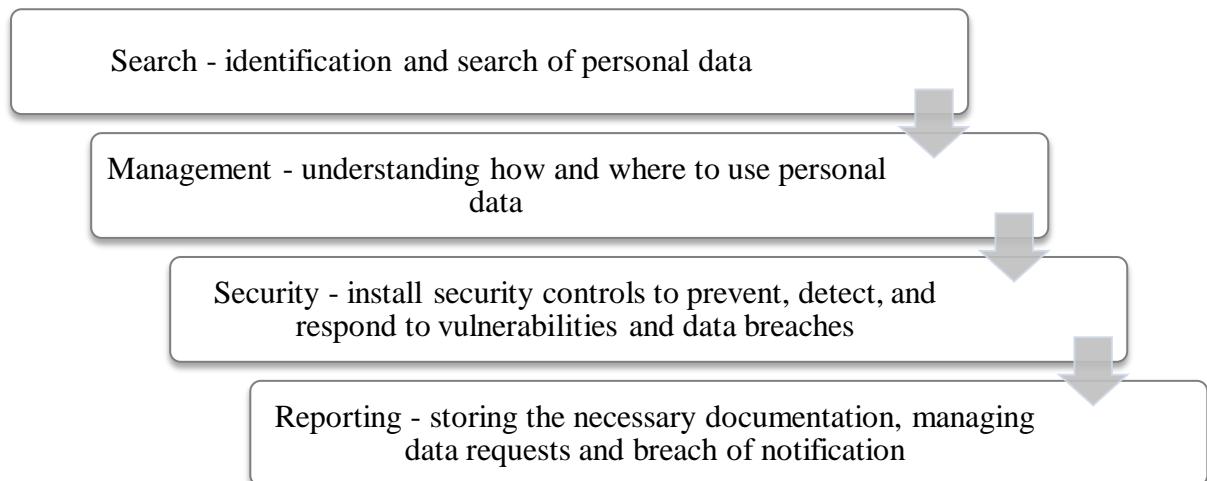
### **How to escape the GDPR in the world**

Closing globally	Closing EU operations	Blocking EU visitors	Partial closure of some game models
Klout.com; Twitter apps for Roku, Android TV, Xbox; Parity ICO Passport Service; MitoSearch.org; Ysearch.org; Loadout; Cointouch.com; StreetLend.com; Super Monday Night Combat	Drawbridge; Verve; Ragnarok OnlinePayver	Steel Root; Unroll.me; Monal.im; Motosport.com; Lee Enterprises (Arizona Daily Sun); A+E Networks (History.com and FYI.tv); Tronc (Chicago Tribune, Los Angeles Times, Orlando Sentinel)	Hitman: Absolution

In order for the enterprise to fully meet modern requirements of quality functioning it must take main steps in terms of the application of a new service, which is aimed at fully digitizing its economic activity, namely:

- audit of company's activities in terms of the collection of personal data: what data, for what purposes, in what form, including technical audit;
- work with the staff and its training;
- development of typical documents: consent, contract, instructions, private policy;
- development of software for process automation: notification of subjects, logging of incoming queries.

The procedure for the implementation of this process is presented in Figure 7. The first step is the search. At this stage, any data is collected to help identify the person (Name; Email address; Social media posts; Physical, physiological, or genetic information; Medical information; Location; Bank details; IP address; Cookies; Cultural identity). An inventory of determining where personal data is collected and stored is carried out (Email, Documents, Databases, Removable media, Metadata, Log files, Backups).



**Figure 7.** General scheme of servation implementation by modern enterprise in conditions of digitalization

Current examples of solutions can lead to the following:

- Microsoft Azure – Microsoft Azure Data Catalog;
- Enterprise Mobility + Security (EMS) – Microsoft Cloud App Security;
- Dynamics 365 – Audit Data & User Activity; Reporting & Analytics;
- Office & Office 365 – Data Loss Prevention; Advanced Data Governance; Office 365 eDiscovery;
- SQL Server and Azure SQL Database – SQL Query Language;
- Windows & Windows Server – Windows Search.

The management phase is to manage data through the definition of policies, roles and responsibility for the management and use of personal data (At rest, in process, in transit, Storing, Recovery, Archiving, Retaining, Disposal).

The classification of data at this stage is to organize and label data to ensure proper handling of (Types, Sensitivity, Context/use, Ownership, Custodians, Administrators, Users). Examples of solutions can be specified by the following:

- Microsoft Azure – Azure Active Directory; Azure Information Protection; Azure Role-Based Access Control (RBAC);
- Enterprise Mobility + Security (EMS) – Azure Information Protection;
- Dynamics 365 – Security Concepts;
- Office & Office 365 – Advanced Data Governance; Journaling (Exchange Online);
- Windows & Windows Server – Microsoft Data Classification Toolkit.

The protection stage should be considered in terms of prevention of data attacks – data protection (Physical datacenter protection; Network security; Storage security; Compute security; Identity management; Access control; Encryption; Risk mitigation). Detection and response to violations should be monitoring and detection of system intrusion (System monitoring; Breach identification; Calculation impact; Planned response; Disaster recovery; Notifying DPA & customers).

Examples of solutions:

- Microsoft Azure – Azure Key Vault; Azure Security Center; Azure Storage Services Encryption;
- Enterprise Mobility + Security (EMS) – Azure Active Directory Premium; Microsoft Intune;
- Office & Office 365 – Advanced Threat Protection; Threat Intelligence;
- SQL Server and Azure SQL Database – Transparent data encryption; Always Encrypted;
- Windows & Windows Server – Windows Defender Advanced Threat Protection; Windows Hello; Device Guard.

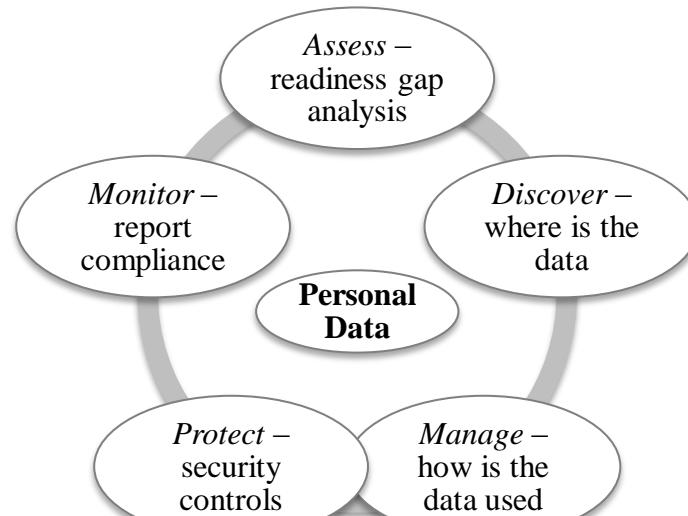
The final stage is reporting. Entrepreneurs should report in the following areas: Purposes of processing; Classifications of personal data; Third-parties with access to the data; Organizational and technical security measures; Data retention times.

Reporting tools are the prospect of implementing all reporting capabilities using Cloud services (processor) documentation; Audit logs; Breach notifications; Handling Data Subject Requests; Governance reporting; Compliance reviews.

Examples of solutions are:

- Microsoft Trust Center – Service Trust Portal;
- Microsoft Azure – Azure Auditing & Logging; Azure Data Lake; Azure Monitor;
- Enterprise Mobility + Security (EMS) – Azure Information Protection
- Dynamics 365 – Reporting & Analytics;
- Office & Office 365 – Service Assurance; Office 365 Audit Logs; Customer Lockbox;
- Windows & Windows Server – Windows Defender Advanced Threat Protection.

The existing modern model of solutions is presented in Figure 8.



**Figure 8.** Model of decisions in terms of servation and digitalization of economic activity of the enterprise

## What is the value of Software Asset Management (SAM)?

1. Better decision making: SAM provides the picture of where you are, what you have, what you need, what you don't, what is at risk, what can be optimized and the path to transformation.

2. Better planification: SAM also provides the foundation for where you want to go, what key IT investment you want to make for your Digital Transformation, how to stay current, in control and how to get the most out of it.

Software Asset Management is an industry practice, documented by ITIL and supported by ISO standards. SAM is vendor agnostic, supported by the whole IT industry. SAM is now a Board Level imperative (Gartner, IDC).

Microsoft is the IT vendor that fully embraces SAM:

1. Dedicated SAM teams in every market

2. SAM MCP competency at individual level

3. SAM expertise in MPN for our Microsoft Partners, whether consulting or transacting

4. SAM Partner ecosystem/community to serve every market

5. SAM funding available to help perform SAM assessments

6. SAM amendments to existing licensing contracts

7. SAM Managed Services Program for advanced Customers

SAM Value scenarios: a specific SAM project aligned to every customer need:

1. Cloud Productivity – Cloud readiness and implementation path assessment

2. Cybersecurity – Cybersecurity risk identification and mitigation assessment

3. GDPR – GDPR compliance identification and readiness assessment

4. Infrastructure Optimization – On-premise to Cloud server estate optimization (Azure)

5. Server Optimization – On-premise SQL workloads and virtualization optimization

**Conclusion.** Changing business models in terms of their digitalization provides an increase in customer loyalty through the omnichannel experience; allows employees to provide a popular service; simplifies daily routine work; allows you to manage strategic planning and merchandising; provides integration with supply chain management; unify business processes by different communication channels (websites, directories, mobile applications, contact centers, social media, etc.). Implementation of entrepreneurial activity at an effective level in the conditions of digitalization of the economy is possible only if there is a favorable general social situation, high-quality work of institutes of entrepreneurial environment, market system of relations, as well as personal freedom of entrepreneur, i.e. his “healthy” personal independence, which allows to make such entrepreneurial decisions, which from his point of view will be the most

effective, effective and profitable.

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