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Resilient by Design: Next-Gen Disaster Recovery Strategies for Financial Services

Prepared for the Technobank conference

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Back where it all began — with 8 years of wisdom!

 **mainstream**
PREMIUM HOSTING

 **technobank** 2017



Take control of your IT infrastructure and expenses
- Enterprise Cloud -

Infrastructure for digital transformation

Belgrade, March 2017.

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About Mainstream:
Why, What & How

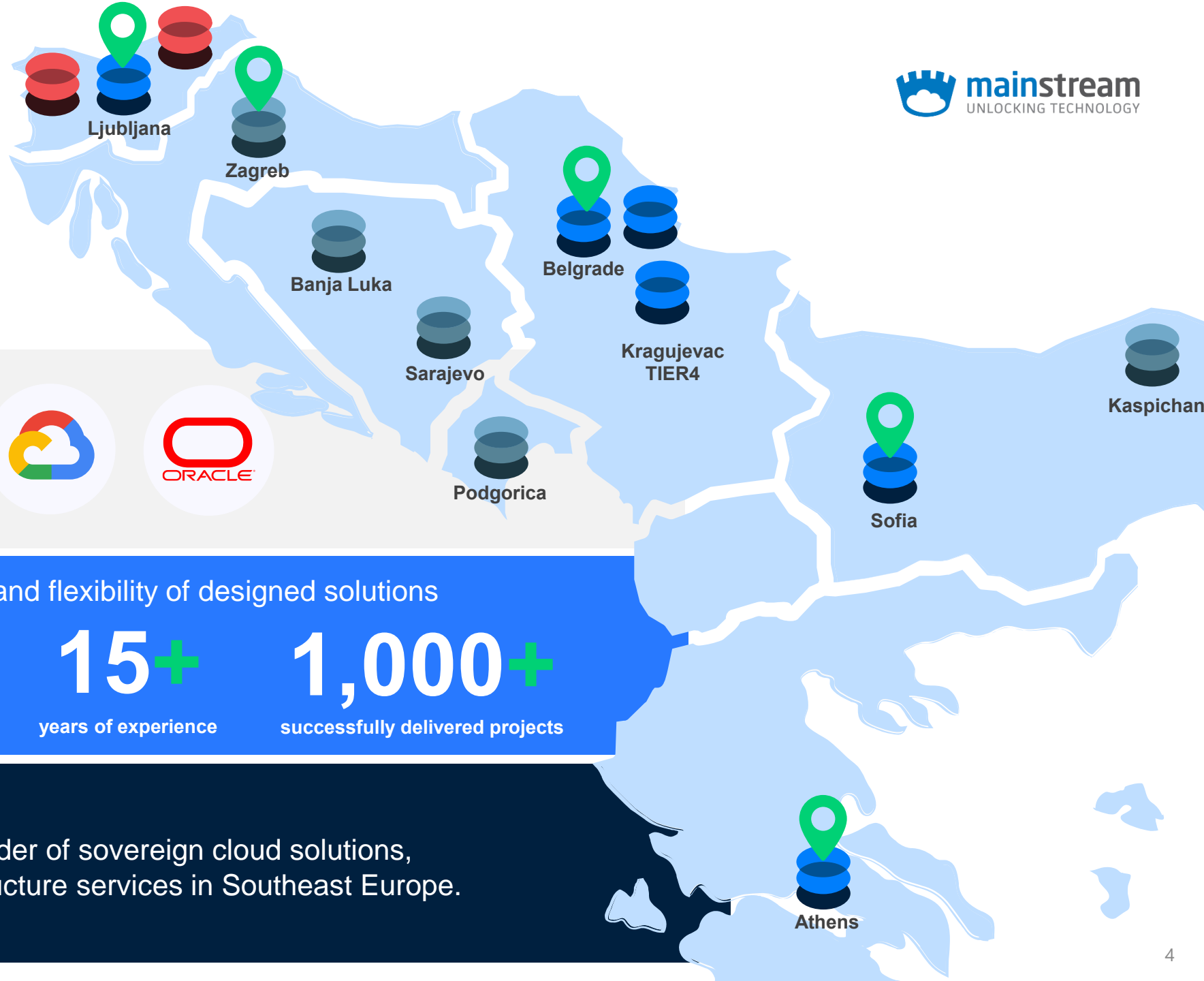
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from our
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Mainstream at a glance



aws



Performance, redundancy, durability and flexibility of designed solutions

100+

cloud and system
engineers

300+

satisfied clients

15+

years of experience

1,000+

successfully delivered projects

Mainstream (MNS) is the largest provider of sovereign cloud solutions, managed hosting, FSI, and IT infrastructure services in Southeast Europe.

Mainstream's FSI service catalogue: 3 main pillars

Mainstream provides the full scope of infrastructure management & application support services, which are tailor-made and adjusted to the specific needs of FSI clients



Data Center and Infrastructure services

- Data center telehousing
- WAN links
- Disaster Recovery as a Services
- Virtual Server services
- Storage Management
- Backup & Restore services
- DB Operations and Performance tuning
- Operating System services (Win, Lin)
- Middleware services



FSI Application operation and 24/7 monitoring

- 3rd party Application support L1/L2
- Application monitoring
- Application deployment
- CI/CD implementation and administration
- OpenShift operations
- Managed File Transfer implementation and support L1/L2/L3
- Application Daily operations
- Application infrastructure performance optimization
- Banking Operation Center 24/7
- Constant monitoring of Infra and Applications
- Overall L1 support



Service Management, Security and Governance

- Incident and Major Incident Management
- Change / Service Request Management
- 3rd Party Vendor Management
- Capacity reporting and planning
- Asset and CMDB Management
- Governance, reporting
- Documentation
- Internal/External Audits support
- National Bank's, Security and ISO Audit Support
- Security services
- Business Continuity Planning and execution

Mainstream has been working with a number of FSI clients



Banks



7/8 Systematically important banks in SRB

National bank in SRB

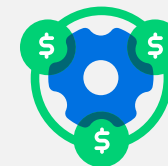


Insurance



3/3 Largest insurance comp. in SRB

The largest online insurance sales platform in SRB



Payment institutions & leasing companies



3 Payment institutions in SRB

3 Leasing companies

Minimum ICSM standards for Disaster recovery (DR) in FSI

In Serbia, the **DECISION ON MINIMUM INFORMATION-COMMUNICATION SYSTEM MANAGEMENT STANDARDS FOR FINANCIAL INSTITUTIONS** lays down minimum standards for **business continuity management** and **disaster recovery** in a financial institution.

✓✓ Annual Testing Requirement

A financial institution shall, periodically and after the occurrence of significant changes, **but at least once a year, test the (DR) plans, document the results of these tests** and ensure their incorporation in reporting to the competent body of a financial institution.

✓✓ Proving Resilience

The testing shall demonstrate whether a financial institution can successfully switch to alternative performance of critical business activities from the **disaster recovery environment** and whether they can be run in this way for a sufficiently long period of time, as well as whether regular operation and stability of the ICT system can be restored afterwards.



Functional environment









Regular annual DR testing









Confirm the ability to switch to an alternative location

Key factors defining the DR implementation model

Factor	Guiding Question	Options
 Hosting Model	Is the infrastructure Physical or IaaS ?	Physical / IaaS
 Ownership of Equipment	Is the infrastructure owned by the client or the provider ?	Client / Provider
 DR site location	Is the DR environment hosted in the client's data center or an external data center ?	Client DC / External DC
 Implementation Responsibility	Who designs and deploys the DR solution?	Client / Provider / Joint
 Operations & Management	Who manages the DR environment during its lifecycle?	Client / Provider / Joint
 Activation Model	Is the system designed to support only full failover or is partial failover also possible?	All Services / Selected Services

Implementation of DR models in practice

Factor	Subsidiary of an International Banking Group	Subsidiary of an International Insurance Company	Leading regional Banking Group	Local manufacturing company as a part of International Group
 Hosting Model	Physical	IaaS	IaaS	Physical
 Ownership	Client	Provider	Provider	Client
 Location	External DC	External DC	External DC	Client DC
 Implementation	Joint (Provider Lead)	Joint (Client Lead)	Joint	Provider
 Operations	Provider	Client	Joint	Provider
 Activation	All Services	Selected Services	Selected Services	All Services

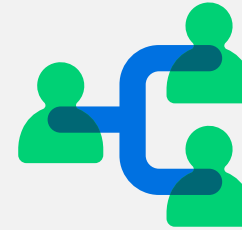
Key takeaways for future-proof DR projects



Given the common occurrence of turbulent changes, it is essential to **adopt an approach of continuous consultations and adaptation** to obtain a flexible, **FUNCTIONAL DR location**.



It is important to **clearly present the project and TCO analysis** to top management.



Constant communication between all interested parties.



Building **strong trust** in your partner (not vendor) is crucial.



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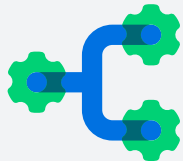
Thank you

www.mainstream.eu

Sofia, Bulgaria | Athens, Greece | Ljubljana, Slovenia | Zagreb, Croatia |
Belgrade, Serbia | Sarajevo, Bosnia and Hercegovina | Podgorica, Montenegro

Mainstream's value

Mainstream is the regional leader in cloud-based transformation services, with a network of **10+ data centers in Europe** and the largest team of cloud experts in SEE.



Enterprise-level infrastructure

Designed to meet the highest enterprise demands for **redundancy, availability and flexibility of cloud solutions.**



Tailor-made solutions

Choose the best cloud solutions **and customise** them to meet your specific needs.



Multi-cloud approach

Our dedicated experts have years of **experience in the development, implementation, optimisation and management** of cloud solutions across public, private and hybrid cloud platforms.



Focused expertise

A regional team of **more than 100 certified and experienced engineers** with expertise in cloud technologies.

One stop shop for **your cloud journey**

→ from planning to operations

Our end-to-end services cover all stages of cloud transformation across private cloud and public clouds: MS Azure, AWS, Google Cloud and Oracle Cloud.

Cloud strategy

- Analyses & assessments
- Cloud design
- Roadmap
- Proof of concept

Cloud migration

- Implementation services
- Cloud-to-cloud services

Cloud management

- Cloud services
- Cost optimization
- Uptime management
- 24x7 support

Cloud security

- SIEM and SOAR
- Security appliances
- Backup
- Disaster Recovery & Business continuity

Cloud data transformation

- Data Strategy
- Data Governance
- DWH & Data lakehouse
- Power BI
- SAS analytics

DevOps and automation

- Onboarding
- Project management support
- DEV-SIT-UAT-PROD
- DevOps tools

Examples of typical services that we provide



Infrastructure modernization services & application lifecycle automation – CI/CD – DevOps for a development company



IT Security and Audit Services for a telco operator

Infrastructure Provisioning Operations Services for an e-commerce retailer



IT Management Services (ITSM) and Services Desk for a large Bank

Data & analytics managed services for a distribution & logistic company



Operation Center and Security Operation Center Monitoring and Support for a large bank

Backup and Restore Management Services for a retail company



COST and Customized Applications Monitoring, Support and Deployment for a distribution & logistic company

Database Management & Optimization Services for a multi-country betting client



Governance and Reporting Services for a large bank

Middleware Implementation & Management Services for a large bank



BC and DRP Services for a manufacturing company

Network Services for a large Bank



DR-as-a-Services for a large insurance company

Note: this is a list of typical example reference projects that we do, we have numerous similar projects in various industries that we can present

Our clients by industries

Retail & Distribution



Financial Services Industry (FSI)



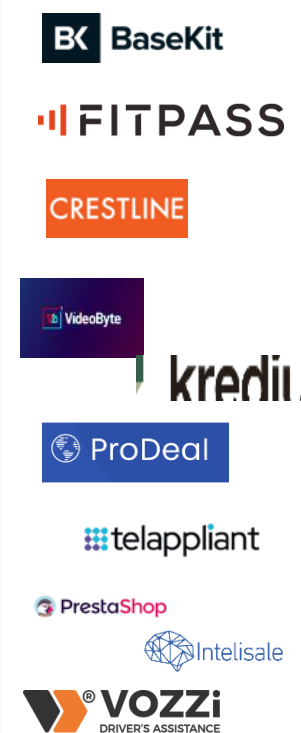
Technology, Media, Telecom (TMT)



Betting & Gaming



Online & Digital



Other (Utility, Real Estate, Airlines & Services)



- Largest retail group in Adriatics (from CRO)
- Largest pesticides wholesaler in SRB
- 4/5 Largest Distribution companies in SRB
- 4/10 Largest Retail companies in SRB
- Top 5 largest e-commerce sites in SRB
- Largest tech retailer in BGR
- One of the leading retail groups in ZAF

- 7/8 Systematically important banks in SRB
- 3/3 Largest insurance comp. in SRB
- The largest online insurance sales platform in SRB
- National bank in SRB

- One of top 5 fiber network firms in UK
- 5/10 largest media portals in SRB

- 3/5 Top Betting comp. in SRB
- Largest SRB & BGR Betting Providers
- 15/21 Online Betting sites in SRB
- 8/20 Landbase Betting companies in SRB

- Various startups and high growth online and cloud-native businesses

- One of the Best low-cost airline operators in Europe
- Largest company in SRB
- Some of the largest holdings in Serbia & Adriatic

Our business leadership



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