Data... Data Cen... Data Centres... Data Centres in... Data Centres in Ukraine.

Building a Modern Data Centres Industry in Post-War Ukraine.

sparkbird





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Why Data Centres in Ukraine?

Introduction

Following the conflict, Ukraine is emerging with new ambitions, looking to become a digital powerhouse in the region. Some key aspects underline its potential.

Ukraine's strides in digitizing its government and finance sectors emphasize its capability and vision, which makes the country a potential digital leader on the global stage.



Ukraine plans to build "smart cities"

Data Usage in Europe

As technology continues to shape our lives, Europe is expected to see a surge in data usage in the coming decades. This means we'll need more places to store and manage this data. The following is why data use will increase and how it's going to impact the construction of Data Centres.



DIGITAL TRANSFORMATION

MANY INDUSTRIES IN EUROPE ARE UNDERGOING DIGITAL TRANSFORMATION, MOVING THEIR OPERATIONS, SALES, AND MARKETING ONLINE. THE INTERNET OF THINGS (IOT) IS GROWING, WITH MORE DEVICES BEING CONNECTED TO THE INTERNET, RANGING FROM HOUSEHOLD APPLIANCES TO INDUSTRIAL EQUIPMENT.



CONTENT CREATION

WITH THE RISE OF SOCIAL MEDIA, VIDEO STREAMING, AND GAMING PLATFORMS, CONTENT CREATION AND CONSUMPTION HAVE SKYROCKETED. 4K, 8K, AND EVEN VIRTUAL REALITY CONTENT DEMAND SIGNIFICANT DATA STORAGE AND BANDWIDTH.



CLOUD ADOPTION

THE ADOPTION OF CLOUD SERVICES IS INCREASING, BOTH FOR BUSINESSES SHIFTING TO CLOUD INFRASTRUCTURES AND FOR CONSUMERS USING CLOUD-BASED APPS AND STORAGE. Impact on Data Usage in Europe (Construction of Data Centres)

ta usage in Europe

S a Due to the rapid growth of data usage in Europe, more there's a rising need to build more data centres. This is essential to efficiently store and manage all that information. The reasons behind this trend and how it's influencing the construction of new data centres across the continent are summarized below:

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Investment in Infrastructure

WITH MORE DATA CENTRES, THERE WILL BEANEEDFORIMPROVED INFRASTRUCTURE, INCLUDING POWER SOURCES, NETWORKING CAPABILITIES, AND PHYSICAL SECURITY.

Increased Demand

A NATURAL OUTCOME OF DATA GROWTH WILL BE INCREASED DEMAND FOR DATA CENTRES TO STORE AND MANAGE THIS DATA. Impact on Data Usage in Europe
(Construction of Data Centres)

Focus on Sustainability

EUROPE HAS BEEN AT THE FOREFRONT OF ADVOCATING FOR SUSTAINABLE PRACTICES. AS ENERGY CONSUMPTION IS SIGNIFICANT CONCERN Α FOR DATA CENTRES, WE CAN EXPECT A PUSH TOWARDS ENERGY-EFFICIENT MORE DATA CENTRE DESIGNS, THE USE OF RENEWABLE ENERGY, AND ADVANCED COOLING TECHNIQUES.

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Land and Location Challenges

HIGH DEMAND MIGHT RESULT IN CHALLENGES RELATED TO FINDING SUITABLE LAND FOR DATA CENTRES, LEADING COMPANIES TO EXPLORE INNOVATIVE SOLUTIONS LIKE UNDERWATER DATA CENTRES OR REPURPOSING OLD INDUSTRIAL SITES.



Distributed Architecture

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EDGE COMPUTING, WHICH INVOLVES PROCESSING DATA CLOSER TO THE LOCATION WHERE IT'S GENERATED RATHER THAN IN A CENTRALIZED DATA CENTRE, WILL LIKELY DRIVE THE CONSTRUCTION OF SMALLER, DISTRIBUTED DATA CENTRES. THIS IS PARTICULARLY USEFUL FOR APPLICATIONS LIKE IOT, WHERE LOW LATENCY IS CRUCIAL.

Data Sovereignty and Regulation EUROPEAN REGULATIONS LIKE GDPR EMPHASIZE DATA PROTECTION AND SOVEREIGNTY. THIS MIGHT DRIVE COMPANIES TO STORE DATA WITHIN EUROPEAN BORDERS, FURTHER FUELING THE DEMAND FOR DATA CENTRES WITHIN THE REGION.

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Why Data Centres in Ukraine?

As Europe considers reducing its technological ties with Russia, Ukraine emerges as a potential hub for data centres. Situated strategically between Europe and Asia, with affordable costs and a skilled IT workforce, Ukraine offers compelling advantages. The following are the key reasons why building a data centre industry in Ukraine might be a strategic move for Europe.



Geographical Proximity

WITH MORE DATA CENTRES, THERE WILL BE A NEED FOR IMPROVED INFRASTRUCTURE, INCLUDING POWER SOURCES, NETWORKING CAPABILITIES, AND PHYSICAL SECURITY.

Why Data Centres in Ukraine?

Nuclear Energy Advantage

UKRAINE HAS A SIGNIFICANT PORTION OF ITS ELECTRICITY GENERATED FROM NUCLEAR POWER. THIS SOURCE OF ENERGY IS NOT ONLY RELIABLE, BUT ALSO EMITS LOW GREENHOUSE GASES COMPARED TO FOSSIL FUELS. HARNESSING NUCLEAR ENERGY FOR DATA CENTRES COULD PROVIDE A SUSTAINABLE AND CONSISTENT POWER SUPPLY, MAKING UKRAINE AN ENVIRONMENTALLY CONSCIOUS CHOICE FOR LARGE-SCALE DIGITAL INFRASTRUCTURE.

FOR A GREAT PRICE

FORSALE

Cost-Efficiency

HISTORICALLY, THE COST OF LABOR AND LAND IN UKRAINE HAS BEEN MORE AFFORDABLE COMPARED TO WESTERN EUROPEAN COUNTRIES. THIS CAN LEAD TO MORE COST-EFFECTIVE OPERATIONS FOR COMPANIES SETTING UP DATA CENTRES.

Political and Economic Considerations

> IF EUROPE SEEKS TO DISTANCE ITSELF FROM RUSSIA, SUPPORTING UKRAINE BY INVESTING IN INFRASTRUCTURE COULD ALSO SERVE AS A GEOPOLITICAL MOVE, STRENGTHENING TIES WITH UKRAINE.



DIVERSIFYING THE LOCATION OF DATA CENTRES CAN PROVIDE REDUNDANCY, ENSURING THAT IF ONE REGION FACES OUTAGES OR ISSUES, DATA SERVICES CAN CONTINUE WITHOUT SIGNIFICANT DISRUPTIONS.

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Why Data Centres in Ukraine?



Black Sea Connectivity Advantage

UKRAINE'S STRATEGIC POSITION ON THE BLACK SEA OFFERS A DISTINCTIVE ADVANTAGE FOR GLOBAL CONNECTIVITY. WITH THE BLACK SEA COASTLINE, THERE'S POTENTIAL TO LAY NEW FIBRE OPTIC CABLES UNDERWATER, ESTABLISHING FASTER AND DIRECT DIGITAL ROUTES TO OTHER PARTS OF THE WORLD, INCLUDING NORTH AFRICA, THE BALKANS, AND EVEN EXTENDING TOWARDS THE MIDDLE EAST. THIS SEA-BASED CONNECTIVITY CAN GREATLY ENHANCE DATA TRANSFER SPEEDS AND REDUCE LATENCIES, POSITIONING UKRAINE AS A PIVOTAL HUB IN THE GLOBAL DIGITAL NETWORK.



Highly Skilled Workforce

UKRAINE HAS A ROBUST IT AND TECH SECTOR, WITH A LARGE POOL OF SKILLED PROFESSIONALS. THIS HUMAN RESOURCE CAN BE TAPPED INTO FOR EFFICIENT AND INNOVATIVE DATA CENTRE OPERATIONS.

Why Data Centres in Ukraine?

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+ Future of Data Centres in Ukraine

Post-War Rebuilding Opportunities

After the conflicts in Ukraine, there's an ongoing rebuilding and modernization process. This presents a unique opportunity to lay state-ofthe-art infrastructure tailored for the digital age. Building from the ground up can ensure the integration of new fibre optic lines, advanced electrical transformer stations, an upgraded electrical grid, and other necessary facilities. This fresh start can enable data centres in Ukraine to operate on a cutting-edge, robust, and efficient infrastructure, ensuring high reliability and performance.

ability and performance.





Future of Data Centres in Ukraine Centres in Ukraine

As the world evolves, Ukraine's data centre strategy - the right vision, substantial investments, and global synergy - will be at the forefront, propelling economic development, technological innovation, and global integration.

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Existing Data Centres in Ukraine



EXISTING DATA CENTRES

TERRESTRIAL NETWORKS

SUBSEA CABLES



NUCLEAR POWER PLANTS



Map of Ukrainian Railway Routes

UKRAINE'S STRATEGICALLY ADVANTA-GEOUS GEOGRAPHICAL LOCATION CAN FACILITATE THE GROWTH OF DATA CEN-TRES AND THE DEVELOPMENT OF FIBER OPTIC CONNECTIONS. THE COUNTRY'S EXTENSIVE RAILROAD NETWORK, WHICH OFTEN CROSSES DIVERSE TER-RAIN, OFFERS AN IDEAL ROUTE FOR FIBER OPTIC LINES. THESE LINES CAN CONNECT MAJOR URBAN CENTRES, INDUSTRIAL HUBS, AND UNDERSERVED REGIONS, EXPANDING ACCESS TO BROADBAND ACROSS UKRAINE.

TERRESTRIAL NETWORKS



Potential Data Centres in Ukraine

IN LIGHT OF THE CURRENT SITUATION IN UKRAINE AND GLOBAL TRENDS IN DATA CENTRE CONSTRUCTION, THE MOST EFFECTIVE APPROACH FOR UKRAINE IS NOT TO FOCUS EXCLUSIVELY ON BUILDING LARGE DATA CENTRES LOCATED PRIMARILY IN THE WEST AND CENTRE OF THE COUNTRY, WHERE NUCLEAR POWER PLANTS ARE BASED. INSTEAD, ADOPTING A DISTRIBUTED MODEL BY BUILDING MANY MODULAR DATA CENTRES ACROSS THE COUNTRY MAY BETTER MEET THE NEEDS OF SECURITY, RESILIENCY, AND EFFICIENT DATA DISTRIBUTION IN TODAY'S DYNAMIC DATA LANDSCAPE.

EXISTING DATA CENTRES TERRESTRIAL NETWORKS POTENTINAL MODULAR DATA CENTRES POTENTIONAL FIBER OPTIC LINES SUBSEA CABLES NUCLEAR POWER PLANTS

Data Centre Strategy for Ukraine



Unlocking Potential

UKRAINE'S GEOGRAPHIC LOCATION PROVIDES A UNIQUE ADVANTAGE FOR INTERNATIONAL CONNECTIVITY. ACROSS THE BLACK SEA, UKRAINE SERVES AS A VITAL LINK IN DATA BACKBONE THAT COULD CONNECT EUROPE AND INDIA. ONE OF THE POTENTIONAL OPTIONS OF DATA TRANSMISSION ROUTES IS TO PASS THROUGH THE BLACK SEA AND CONNECT UKRAINE WITH ISRAEL, JORDAN, SOUTH ARABIA, OMAN, AND INDIA, FURTHER STRENGTHENING ITS ROLE AS A KEY TRANSIT CORRIDOR FOR DATA TRAFFIC BETWEEN THESE REGIONS. THIS STRATEGIC POSITIONING NOT ONLY BENEFITS UKRAINE'S DATA INFRASTRUCTURE, BUT ALSO STRENGTHENS ITS POSITION IN THE GLOBAL DIGITAL LANDSCAPE.

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EXISTING DATA CENTRES POTENTIONAL MODULAR DATA CENTRES POTENTIONAL FIBER OPTIC LINES

TO BE CONTINUED

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