

Capacity Planning and Investment for Electrification of Maritime Container Ports
(Technical Report)

Independence, Insurgency, and Identity: Ukraine's Digital Warpath
(STS Research Paper)

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by

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Preface

How does real-time data sharing improve system communications and operations? Information syncing supports systematic planning, conveys current political sentiments, and refines decision making. Obsolescent methods risk undesirable outcomes and increased time costs. In the scope of both industrial functions and geopolitics, current data improves flexibility of action plans and adaptability to adverse scenarios.

How can electric equipment be implemented across the Port of Virginia? High carbon emissions from port operations demand green energy techniques. Optimal combinations of clean energy sources in terms of cost, safety, and implementation feasibility have yet to be identified. State-of-the-art research motivated the addition of hydrogen-based power to electricity. Simio was used to visualize discrete sections of the port. Cranes, utility tractor rigs, electric top picks, and shuttle carriers were simulated and included in capacity planning. Use case results provided insight into environmental and work efficiency benefits from electric and hydrogen-based equipment expansion, and informed recommendations on charger and electric vehicle investments.

Since 2014, how have defenders of Ukrainian independence advanced their agendas through use of social media? Of the weapons of war in Ukraine, social media has been among the most effective. Participant classes include armed forces, civilians-turned-refugees, nationalists, reporters, content creators, and artists. In a country lacking resources and political influence, online discourse joined conventional constructs of military success to sustain resiliency and morale.