

WARGAMING UKRAINE

Military Simulations For a Flashpoint Region

INTRODUCTION

- *The Purpose of Military Simulations*
- *Gaming a Russian Offensive*
- *What the West Could Do*
- *Russia's Cost-Benefit Analysis*

THE PURPOSE OF MILITARY SIMULATIONS

- “War game” exercises are useful for determining military options and strategies by one or more actors in a conflict.
- Simulations help to measure – and map – the intersection of political will within the bounds of military capabilities and potential costs.
- This presentation involves possible scenarios – not a forecast. The goal is to describe a range of military options available to Russia, and potential follow-on developments if Russia or Western powers were to escalate the use of force in Ukraine.

ABOUT THIS STUDY

- Scenarios described in this presentation are results of an intensive internal simulation exercise conducted by Stratfor analysts in March 2015.
- Conclusions presented here outline only military operations and outcomes.
 - Some of the limited scenarios presented might achieve acceptable political outcomes for Russia (for example, forcing Kiev to accept a decentralization of government).
 - Limited political objectives likely would be met without an overt Russian military campaign, relying instead on Ukrainian separatist units and clandestine Russian volunteers.
- Material in this presentation was originally published as a three-part series on Stratfor.com in March 2015.

BACKDROP: THE RUSSIA-UKRAINE CRISIS

- **November 2013:** Political protests erupted after Ukrainian President Victor Yanukovich refused to sign an association agreement with the European Union. Pro-EU demonstrations gathered strength in the coming months.
- **February 2014:** Yanukovich, a pro-Russian president, was ousted from power in Kiev. Pro-Russia demonstrations, some of them violent, began to crop up in far eastern Ukraine, a largely Russophone region.
- **Late February-March 2014:** Russian troops aided protesters in eastern Ukraine. Separately, Russian forces captured strategic sites throughout the Crimean Peninsula.

BACKDROP: THE RUSSIA-UKRAINE CRISIS

- **March 2014:** Russian forces seized the Crimean parliament. The local government was dissolved and a new, pro-Russian leader was installed for Crimea, paving the way for a declaration of independence and a controversial referendum asking Crimeans whether they wanted to rejoin Russia as federal subjects. Western powers view this action as Russian annexation of Ukraine – a term that Moscow opposes.
- **March 2014-February 2015:** Violent military confrontations between Russia-leaning separatists and Ukrainian forces were centered in the Donetsk and Luhansk regions of eastern Ukraine. Russia provided ongoing support for separatist forces.

BACKDROP: THE RUSSIA-UKRAINE CRISIS

- **Mid-2014-Early 2015:** International negotiators engaged in on-again, off-again cease-fire talks in Minsk.
- **February 2015:** Terms of a cease-fire were agreed and began to take hold in eastern Ukraine. But tensions remained high.
- ***Stratfor's assessment:*** *Ukraine will be a “frozen conflict” for Russia and the West for the foreseeable future.*
- The following scenarios examine potential outcomes in the event that the “frozen” conflict should turn “hot” again.

Gaming a Russian Offensive

RUSSIA'S POSITION

- In early 2015, Russia's military position in Ukraine was very exposed – and came at great cost relative to the limited political gains that Moscow achieved.
 - Crimea, a strategic bastion, defensible as an island, but vulnerable to isolation
 - Ukrainian separatists and Russian backers, in eastern Ukraine, require heavy military investment to secure
 - Separatist conflict in eastern Ukraine has not helped Russia achieve larger objective of creating defensible borders
- **Question:** Will Russia take further military action to secure interests in Ukraine?

ASSESSING RUSSIA'S OPTIONS

- Scenarios and methods to find the answer:
 - Six basic military options Russia might consider
 - Cost factor: Likely time, logistical support and forces required to conduct each operation
 - Capabilities factor: Do Russian forces have ability to execute each operation?
- **Underlying assumption:** Russian forces would face initial opposition only from Ukrainian forces already involved in the conflict. A NATO/US operation would take much longer to mount, entering theater only after Russians had achieved defensive positions.

THREE CORE SCENARIOS

- We found three core strategies that are available to Russia. These are examined more closely in the following slides.



- The final three options we considered are variations on these themes.

SCENARIO 1: LAND BRIDGE OPTION



SCENARIO 1: LAND BRIDGE OPTION

- **Objective:** Create a land bridge linking Crimea with separatist forces in Ukraine – thus securing supply lines into Crimea and strengthening the peninsula against isolation
- **Requirements/assumptions:**
 - Secure Crimea's primary water supply, sourced from Dnieper River
 - Defensive lines anchored to greatest extent possible to the river, the only defensible terrain feature in the region
- **What an offensive would look like:**
 - Russian forces drive more than 400 km (250 miles) into area of 46,620 sq km
 - Establish more than 450 km of new defensive lines
 - Subdue population of 2 million

SCENARIO 1: LAND BRIDGE OPTION

- **Force requirements:**
 - 24,000-36,000 personnel
 - Six to 14 days
- **Defensive possibilities:**
 - NATO intervenes on behalf of Ukrainian forces: Russia expands troops to 40,000-55,000, to hold territory
 - Local insurgency: Size of countering force varies by locale (size of population/level resistance expected)
 - Compliant population (i.e., within Donbas region) – 4,200 Russian troops
 - Extreme resistance (outside Donbas region) – up to 42,000 Russian troops
 - External threat: Should one emerge, counterinsurgency forces would have to be separate from defensive forces

SCENARIO 2: COASTAL OPTION

COASTAL SCENARIO



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SCENARIO 2: COASTAL OPTION

- **Objective:** Seize southern coast of Ukraine, connecting all Russian forces/interests from Crimea to Transdnistria (breakaway region of Moldova)
 - Secures all Russian interests in region in single arc
 - Cuts pro-Western Ukraine off from Black Sea
- **Requirements/assumptions:**
 - Same defensive requirements as land bridge option
 - Doubled in size of territory/troops committed

SCENARIO 2: COASTAL OPTION

- **Force requirements:**
 - Attacking force: 40,000-60,000 troops
 - Defensive force: 80,000-112,000 troops
- **What an offensive would look like:**
 - Russian forces drive nearly 645 km (400 miles) to seize 103,600 sq km of territory
 - 23-28 days
 - Subdue population of ~6 million
 - 13,200-120,000 counterinsurgency forces required

DRAWBACKS OF OPTIONS 1 AND 2

- **Extreme exposure to troop positions:**
 - Extended positions over flat terrain
 - Costly or indefensible against concerted attack by modern force
- **Supply lines vulnerable:**
 - Long supply lines in both scenarios
 - In Scenario 2, supply lines rely on bridging operations over major river

SCENARIO 3: EAST UKRAINE OPTION



SCENARIO 3: EAST UKRAINE OPTION

- **Objective:** Seize all of eastern Ukraine up to the Dnieper River, using the river as a defensive front line
 - Best option for defending captured territory
 - Bridging operations challenging for opposing forces; Russians/separatists can focus on defensive chokepoints
 - Anchors defense on solid terrain
- **Drawback:**
 - Massive military operations required

SCENARIO 3: EAST UKRAINE OPTION

- **Force requirements:**
 - Attacking force: 91,000-135,000 troops
 - Defensive force: About the same, with river bolstering defensive capabilities
- **What an offensive would look like:**
 - Russian forces would advance as much as 402 km (250 miles) to secure about 222,740 sq km of territory
 - 11-14 days, with troops advancing along multiple routes
 - Subdue population of 13 million
 - 28,00-260,000 counterinsurgency forces required

SCENARIO 3: EAST UKRAINE OPTION

- **Other considerations:**
 - Russia commands ~280,000 ground troops
 - Initial drive would tie down substantial portion of Russian military (nearly all of its actual combat units)
 - Intense insurgency could threaten Russia's occupying ability, even with all forces fully committed
 - Massive mobilization and retasking of Russian security forces would be impossible to mask from U.S. or Europe
- **Russia lacks capacity to conduct this operation to the fullest extent**

SCENARIOS 4 AND 5: VARIATIONS

- **Option 4: Limited seizure of eastern Ukraine**
 - Russia takes only the southern half of this territory
 - Requires less combat power than Option 3
 - Removes defensive advantages provided by Dnieper River
 - Exposes Russian flank
- **Option 5: Minor expansion of existing separatist lines**
 - Option brings remainder of Donetsk and Luhansk regions under Russian control
 - Executable operations
 - No practical military or political gains

SCENARIO 6: SCATTERING OPERATION

- **Option 6: Small, temporary incursions along entire Ukrainian border**
 - Threaten key objectives and spread Ukrainian forces thin
 - Efficient and effective for Russian forces
 - Achieves small political and security objectives
 - Scare tactic against Ukraine

SIX SCENARIOS: CONCLUSION

- **Consistent findings across all scenarios**
 - All but the most expansive scenario are technically possible for Russian military
 - All have serious drawbacks
 - Mismatch:
 - Meet security/political objectives?
 - Using limited or reasonable means?

What the West Could Do

CONSIDERING OPPOSITION

- Any contemplation of military action in Ukraine by Russia forces Russian planners to consider possibilities of a NATO or U.S. counteroffensive.
- A U.S. or NATO coalition operation would be complex:
 - Use of air assets to quickly deploy firepower to theater
 - Considerable ground forces likely not deployed without achieving air superiority

THEREFORE ...

- Study of Western counteractions hinges on ability to deploy considerable air power into Ukraine to halt or roll back Russian forces

CONSIDERING OPPOSITION

- Russian planners must assume and plan for worst-case scenario:
 - NATO countries in Eastern Europe open bases to consider U.S. Air Force deployment, offer logistical support
 - Stages of Western counteroffensive would include:
 - Deploying assets to air fields near Russian troop locations
 - Logistical support arranged/provided for deployment
 - Operations against Russian air defenses commence
 - Ground campaign launched to reduce Russian capabilities in Ukraine

AIR DEPLOYMENT CHALLENGES

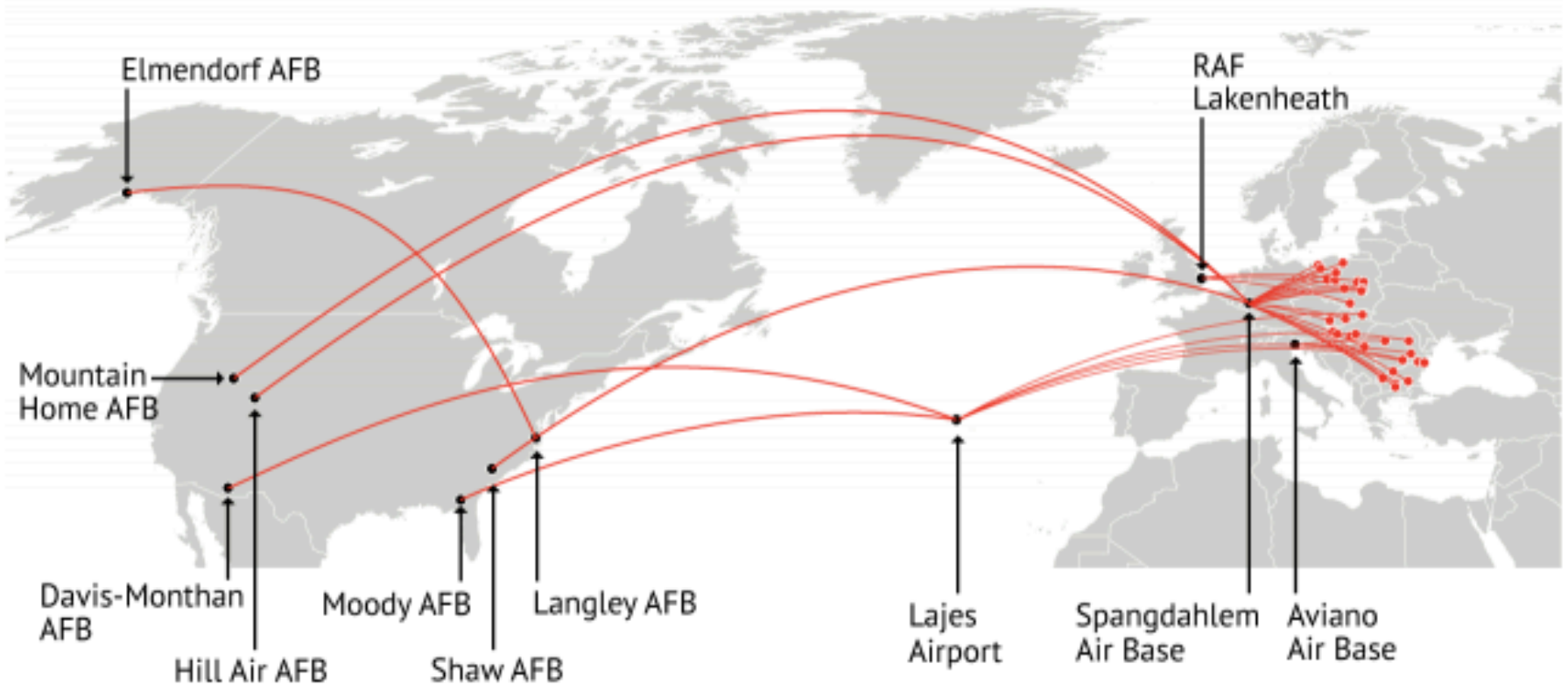
- Air superiority campaign would be difficult for Western coalition:
 - Cripple/defeat significant Russian air assets supporting offensives
 - Deplete ground-based Russian air defenses ahead of a ground attack
 - Highest possible number of advanced fighter craft required to achieve strategic weight required
 - Forward deployments would be required for European partners in NATO effort:
 - Limit flight time to targets
 - Reduce strain on aerial refueling capabilities

U.S. AIR FORCE DEPLOYMENTS

- U.S. aircraft from European bases would deploy in first 48 hours from:
 - RAF Lakenheath – 3 F-15 squadrons
 - Aviano Air Base – 2 F-16 squadrons
 - Spangdahlem Air Base – 1 F-16 squadron
- Multiple reinforcing squadrons would be required:
 - Sequential deployments
 - Various U.S. air bases

U.S. AIR FORCE DEPLOYMENTS

STRATEGIC DEPLOYMENT OF U.S. AIR FORCE ASSETS TO EASTERN EUROPE



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PLAYING OUT A DEPLOYMENT

- **What U.S. deployment would look like – best-case scenario:**
 - 22 fighter squadrons
 - 11 days
 - Two phases
 - Phase 1: Latest-generation fighter air superiority assets, aircraft specializing in SEAD, UAVs for intelligence
 - Phase 2: A-10 ground attack aircraft, possibly rotary-wing aircraft to assist with ground campaign
- Staging locations:
 - 30+ bases in Poland, Slovakia, Hungary, Romania, Bulgaria
 - Additional bases in Germany, Italy
 - Aircraft carriers, likely in Aegean Sea
 - Up to 3 carriers wing deployments possible in 4 weeks

THE TIME FACTOR

FIGHTER DEPLOYMENT TO EASTERN EUROPE

This table indicates the estimated time between the initial order for strategic deployment and the time of arrival of separate U.S. Air Force assets in Eastern Europe.

Aircraft type	Number of aircraft	Time of arrival in theater (hr)	Aircraft type	Number of aircraft	Time of arrival in theater (hr)
F-16CG	24	24	F-15E	18	122
F-16C	24	25	F-16CG	24	138
F-15E	18	26	F-22A	18	146
F-16CG	24	32	F-15E	18	162
F-15C/D	24	34	F-16C	24	170
F-15E	18	50	F-22A	18	186
F-22A	18	56	A-10	24	194
F-16CJ	24	74	A-10	24	210
F-16CJ	24	90	A-10	24	218
F-16CJ	24	98	A-10	24	234
F-22A	18	114	A-10	24	242

The selection of fighter squadrons to be deployed was done based on the needs of the mission and maintaining a U.S. Air Force presence at home and in Asia.

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THE TIME FACTOR

- Before massing aircraft in Eastern Europe, coalition forces can:
 - Use air-launched standoff missiles or
 - Use sea-launched cruise missiles to
 - Target Russian air defenses, supply depots, possibly airfields used in eastern Ukraine
- Given time needed to move U.S. assets into theater, full-scale operations likely only AFTER Russia achieves most offensive aims:
 - Russian mobile defenses in place
 - Initial Russian attack concluded
 - Coalition maneuvers aimed at degrading Russia's defensive capabilities in Ukraine

THE TIME FACTOR

- Follow-on phase:
 - Rely on F-16J “Wild Weasels,” allied aircraft with radar-seeking missiles
 - Take out Russian ground-based air defenses
 - Key remaining Russian asset: aircraft fleet
 - Air combat likely to result in significant attrition to both sides

POTENTIAL OUTCOMES

Russian Advantages

- Operating close to home
- Aircraft deployed from home bases
- Higher number of sorties per aircraft
- Russians flying over their own ground-based air defense systems
- Limited payloads onboard

Coalition Disadvantages

- Forward-deployed
- Extended supply and refueling logistics
- Threatened by Russian ground defenses
- Forced to carry radar-seeking missiles and ground attack munitions, adding to weight and drag

POTENTIAL OUTCOMES

Coalition Advantages

- Substantially larger air fleet possible over Russians
- Total # possible daily sorties outnumber Russia's (for total NATO force)
- Better stealth capabilities, ISR assets
- More experience in expeditionary deployments, interoperability

Russian Disadvantages

- Small fleet size
- Lower-quality stealth and ISR
- Less experienced in expeditionary deployments and other high-stress battlefield environments

OUTCOMES

- **Likely to favor NATO forces** – numerically and technologically superior
- Prudent Russian planners would consider:
 - Uncertainty of maintaining air superiority
 - Without air superiority, other Russian gains could be unsustainable
 - NATO air superiority could pave way to devastating ground attack
 - Time factor – several weeks have passed by the time this phase of operations unfolds
 - NATO ground forces have had time to complete deployments to Eastern Europe

Russia's Cost- Benefit Analysis

THE BIG PICTURE

- Russia's geopolitical imperatives include:
 - Secure/anchor borders in defensible terrain
 - Preserve strategic depth by maintaining a buffer region against European/NATO powers to its west
- Military operations must be more than feasible. They also must serve a broader political objective.
- Very few of the foregoing scenarios would serve Russia's need to secure or expand its strategic depth.

A CLOSER LOOK AT UKRAINE

- Why is Ukraine critical to Russia's security?
 - Encompasses wide landmass in the Intermarium (the region between the Black and Baltic seas)
 - Crimean Peninsula – home to Russian naval forces
 - Critical transit state for Russian energy exports
 - NATO enlargement and Western influence in Eastern Europe viewed as threatening encroachment by Russia

RUSSIA'S NEAR ABROAD

THE INTERMARIUM



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A CLOSER LOOK AT UKRAINE

- What makes Russia nervous?
 - Ukraine has swung between pro-Western and pro-Russian leadership for years
 - Following Yanukovich's ouster, government in Kiev leaned heavily toward West
 - Could NATO pact borders come within 435 kilometers (270 miles) of Moscow?
- Is Ukraine important enough to NATO/U.S. to mount a military operation?
 - Probably not – but Russia must consider all risks
 - Economic sanctions more likely tool – made sharper by weakness of Russian economy

FROM SIX OPTIONS TO ONE

Only one of the six scenarios examined would yield fruit for Russia:

WITHIN CAPABILITIES?

IMPROVE STRATEGIC DEPTH?

Land Bridge scenario:



Coastal option:



Eastern Ukraine option:



Limited seizure of Eastern Ukraine:



Expand existing separatist lines:



Scattering operation:



WHAT DOESN'T WORK

- **Land Bridge scenario**
 - Benefits:
 - Guarantees freshwater supplies for Crimea
 - Severe economic damage to Ukraine/Kiev
 - Drawbacks:
 - Crippling Kiev financially doesn't guarantee Russian security
 - Could leave Ukraine reliant on Western funding and protection

WHAT DOESN'T WORK

- **Expand existing separatist lines**

- Benefits:

- Current lines provide some depth for Russia's Volgograd and Rostov regions (which form connection to Russia's southern border in Caucasus)
 - Operation to establish separatist control of entire Donetsk and Luhansk regions could destroy Ukraine's military, heavily committed to this area

- Drawbacks:

- Russia still loses rest of Ukraine as a buffer
 - Significant gaps in the buffer around eastern Ukraine would still exist
 - Possibility of deepened Ukraine/West relations remains/could increase

ONE OPTION, MANY CONSTRAINTS

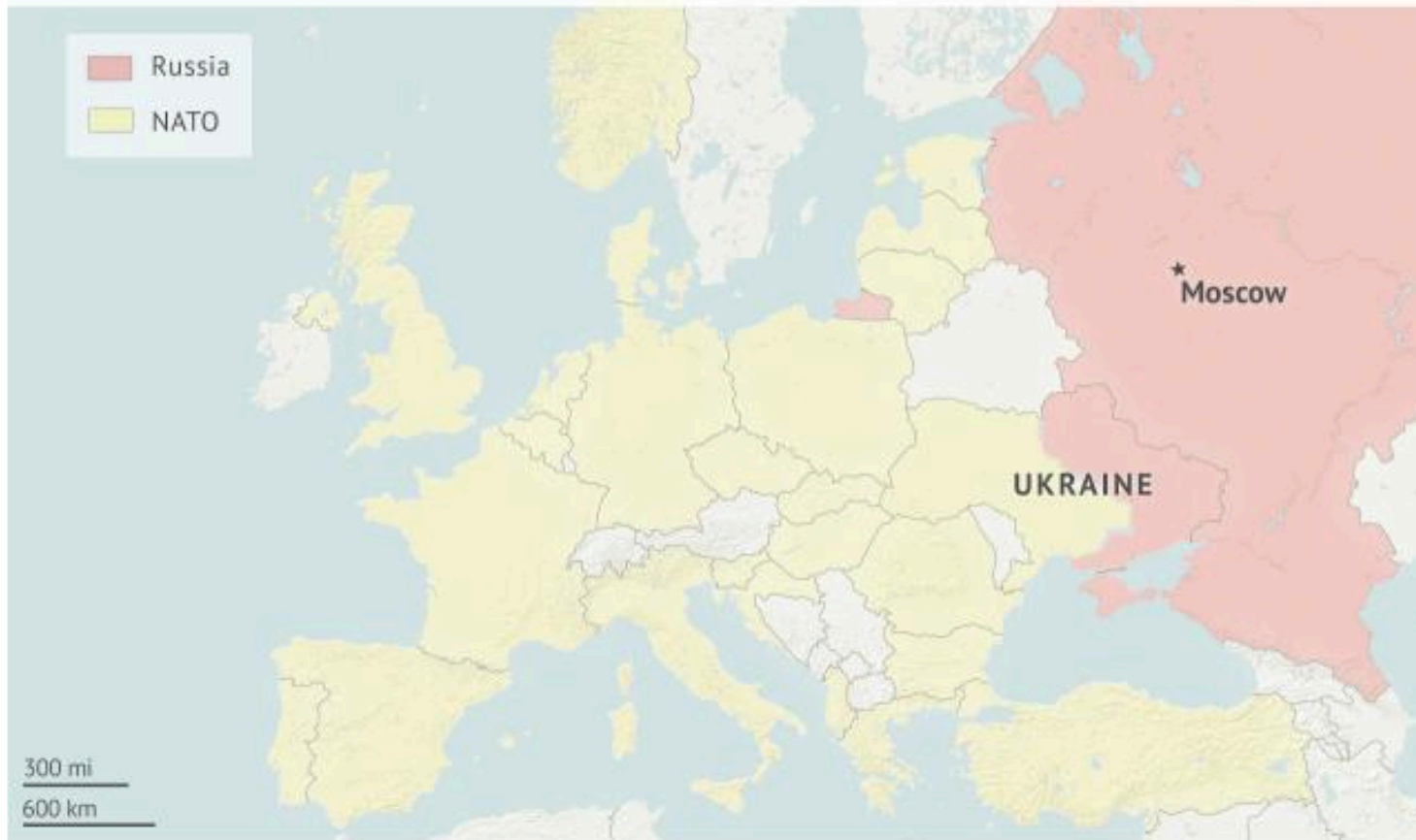
- Russia would face many challenges in seizing and controlling eastern Ukraine:
 - Manpower requirements:
 - Would command considerable portion of ground forces
 - Repurposing of existing security forces likely
 - Increased military recruiting and mobilizations of reserves likely
 - Consider military staffing needs in other parts of periphery, security threats from other angles
 - Financial constraints
 - Drop in oil prices has put pressure on Russia's budget
 - Significant mobilizations would require additional defense expenses
 - Other considerations
 - Success not guaranteed
 - NATO might cripple Russia's military capabilities

ONE OPTION, MANY CONSTRAINTS

- Although the Eastern Ukraine scenario is the most useful/valuable in terms of geopolitical imperatives, the size, expense and resulting vulnerabilities mean that attempting the operation would not realistically lie within Russia's capabilities.

A RUSSIAN NIGHTMARE

HYPOTHETICAL SITUATION FOLLOWING A RUSSIAN INVASION TOWARD THE DNEIPER RIVER



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RISKS OF ESCALATION

- A U.S./NATO intervention in Ukraine would substantially increase hostilities with Russia in its own right.
- Western intervention also brings other, implicit threats:
 - Escalation option for Russia: Strike at West in other theaters
 - Ballistic missiles
 - Cruise missiles
 - Airstrikes
 - Nuclear threats by either side – unpredictable dynamic
- Russian escalation threat
 - Advantage: Could serve as deterrent to Western intervention
 - Disadvantage: Could spur West to supply arms or deploy forces in support of western Ukraine

BEST OPTION, WORST CASE

- Strategy: Russia seizes eastern Ukraine and anchors along the Dnieper River
- Worst outcomes:
 - NATO/West perceive “new Iron Curtain” along banks of the Dnieper and resort to Cold War response
 - Western forces now MUCH closer to Russian borders than before
- Russian equations:
 - Seizing eastern Ukraine = ~320 km additional strategic depth for Russia proper
 - Seizing eastern Ukraine = loss of 800 km of neutral buffer zone territory
 - Borders more defensible = buffer zone evaporates

ONLY ONE WINNING MOVE

- No obvious options stand out for Russia:
 - Most beneficial option would also carry greatest cost and political risk
 - No guarantee of success with any option so long as U.S. or NATO military response remains a possibility
 - Absent a direct military response, closer political, financial, security ties between Ukraine and the West could undermine any military gains made by Russia
- What's the winning move?
 - Reference “Joshua,” the supercomputer in 1983 movie “WarGames”:

CONCLUSION



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