

FÜHRUNGSAKADEMIE *der* BUNDESWEHR

**Faculty of
Politics, Strategy and
Social Science**



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Clausewitz-Kaserne
Fakultät Politik, Strategie und
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Blomkamp 61
22549 Hamburg



22.09.2019

Connections UK

Hosting a Matrix Wargame in a Slack Workspace



05. September 2019

German Armed Forces Command and Staff College



The really irresponsible force behind BREXIT





„Hosting a Matrix Wargame in a Slack Workspace“

„Hosting a Matrix Wargame in a Slack Workspace“

Connections UK
05. September 2019

Evaluation



Agenda

1. Introduction

2. Terminology

3. Hosting a Matrix Wargame in a Slack Workspace

4. Way Ahead

3.1 Setup

3.2 Conceptual Framework

3.3 Moves and Secret Moves

3.4 After Action Review (AAR)

3.5 Conclusion

Introduction



https://join.slack.com/t/mwgkalinigrad20xx/shared_invite/enQtNTI3NjU5NDEzNDcyLTQ1NGU3ZDk5MGE2ODczNDhIMjY4YTU1ZTI1NmViY2E0MGMzODk1Yjc4MjIwMmNiZGY4ZGRmNTdjZWU1MDYxMzA



Screenshot Introduction

MWG Kalining...
Thorsten Kodalle

Jump to...

All Unreads

Threads

Shared Channels

Channels

00-sme-coordination

000-scenario-rules

000faq

000fun

000migration-refugees

000terror

000worldopinion

001diplomacy

002information

003military

004economy

005law

01-rus-chn-public

02-eu-fra-ger-public

03-nato-gbr-public

04-usa-tur-public

05-bsp-swe

aar2019-1firstrun

aar2019-2secondrun

aar2019-3thirdrun

africa

announcements

balkan

#bls2019-2turn04

☆ | 31 | 0 | Add a topic

Thursday, May 16th

prognose/ 21.01.2019
last moves of EU and NATO

USA_Hamacher 14:39
Bild Move 4.jpg



Daniel Bendel 14:52
real american eagle
EAGLE.jpg



Thursday, May 23rd

Cyril Widdershoven 10:06
joined #bls2019-2turn04.

Search

@ ☆ ⋮ 2 Updates

Thread

01-rus-chn-public

Pinned by you · Starred

Thorsten Kodalle Jul 5th at 09:59

Aus Garbor Steingarts Morning Briefing:
Europa hat in diesen Tagen mächtig zu kämpfen: historische Höchststände bei den Staatsschulden, politischer Zwist in Brüssel, Technologiebrüche in allen Branchen und eine fortschreitende Überalterung. Die Pessimisten sprechen vom europäischen „Abstieg“. Die Optimisten rufen nach „Erneuerung“. Beide meinen das Gleiche.

...

China indessen nutzt das europäische Abgelenkt-Sein zum Ausbau seiner ökonomischen Kraft. Inzwischen ist das Land mit mehr als 13 Billionen US-Dollar beim Bruttoinlandsprodukt nach den USA zweitstärkste Wirtschaftsmacht und kaufkraftbereinigt sogar schon die Nummer Eins.

Aber, und darüber wäre heute Morgen zu reden: Die Errungenschaften der Digitalisierung und die Möglichkeiten der Künstlichen Intelligenz werden in geradezu aufreizender Deutlichkeit zur Befestigung der politischen Macht eingesetzt. Europa streitet über das Spitzenkandidaten-Prinzip und in China entsteht unter Xi Jinping eine digitale Diktatur neuen Typs, ohne jede Debatte.

...

Während der russische Präsident Putin im Interview mit der „Financial Times“ behauptet, der gesellschaftliche Liberalismus sei „obsolet“, tritt China lautlos an, genau diese These zu belegen. Selten war ein autoritärer Staat derart modern: Repression durch Innovation.

Auf offener Bühne glänzt das System mit dem Persönlichkeit



Terminology

- **Wargaming, Serious Gaming and Gamification**
- **Matrix Games**
 - **Matrix Wargame**

NATO RTG „Wargaming“ and „Gamification of Cyber Defence/Resilience“ have no clear-cut definitions

NATO sometimes is even divided about how to write terms

“Cyberdefence”

“Cyber Defence”

“Cvber-Defence”



John Curry 5:51 PM

Thank you. I have had a good look around. I am impressed with the use of slack as a gaming tool!





Hosting a Matrix Wargame in a Slack Workspace



Setup

Setup



Screenshot Setup

MWG Kalining...

Thorsten Kodalle

Jump to...

All Unreads

Threads

Shared Channels

Channels

00-sme-coordination

000-scenario-rules

000fag

bls2019-2

bls2019-2turn00

bls2019-2turn01

bls2019-2turn02

bls2019-2turn03

bls2019-2turn04

bls2019-2turn05

s01-chn-secret

s01-rus-chn-secret

s01-rus-secret

s02-eu-fra-ger-secret

s02-eu-secret

s02-fra-secret

s02-ger-secret

s03-gbr-secret

s03-nato-gbr-secret

s03-nato-secret

s04-tur-secret

s04-usa-secret

s04-usa-tur-secret

s05-bsp-secret

s05-bsp-swe-secret

s05-pol-secret

s05-swe-secret



Conceptual Framework

Flexibility

- **low-tech high-abstraction approach for modelling complex situations**
- **pen-and-paper on-premise role play**

Technology

- **collaborative web 2.0 tool**
- **provide an asynchronous and synchronous contact between SMEs and players all around the globe**



Moves and Secret Moves

Kaliningrad 20XX Students FüAkBw lead



Left of Bang - Baltics Experts NDU lead





Screenshot Moves

MWG Kalining...
Thorsten Kodalle

- # 004economy
- # 005law
- # 01-rus-chn-public
- # 02-eu-fra-ger-public
- # 03-nato-gbr-public
- # 04-usa-tur-public
- # 05-bsp-swe
- # aar2019-1firstrun
- # aar2019-2secondrun
- # aar2019-3thirdrun
- # africa
- # announcements
- # balkan
- # basdifo
- # bls2019-2
- # bls2019-2turn00
- # bls2019-2turn01
- # bls2019-2turn02
- # bls2019-2turn03
- # **bls2019-2turn04**
- # bls2019-2turn05
- # bsp-us_secret
- # cyberstrategygame
- # d64
- # dcdc
- # forumzukunft
- # general
- # globalmwg
- # iccws2019
- # ltfueakbw

#bls2019-2turn04
31 | 0 | Add a topic

Daniel Bendel 14:38
1/3

image.png

What action do you take (DIME)? What is the intended outcome of your action? How is your action implemented?

Action (DIME: What diplomatic, information, military, economical action do you take?)
Dimension: Diplomatic / Economic
Host a diplomatic/ economic Arctic-summit concerning trade relations and military action within the arctic.
Goal (What is your intended outcome?)
Establishment of long-term SLOC and scientific partnerships concerning energy and environmental topics.
Implementation (How are you going to get there?)
Lead: RUS/ USA
Other participants: FIN / SWE

14:38 2/3

image.png

What effect do you want to achieve (PMESII)?

Effect (PMESII – political, military, economic, social, infrastructure, information)

Domain	Effect
Politic	Agreements about further political course of action
Military	Agreements about further military exercises within the area
Economic	• Establish safe SLOC within area • Connect scientists • Promote further "boarder crossing" scientific actions.
Social	Show peacekeeping intentions of actors (World-Opinion!)
Infrastructure	TBD
Information	-

3/3

image.png

Rational and reasoning: Why do you think will this work?

Rational
1. Arctic as coming conflict potential
2. Worldwide appeasing efforts

Sources
<https://www.businessinsider.de/in-der-arktis-koennte-sich-ein-gefaehrlicher-konflikt-anbahnen-2018-1> 18.01.2018
<https://de.sputniknews.com/politik/20190121323686468-arktis-konflikt-prognose/> 21.01.2019
last moves of EU and NATO

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Thorsten Kodalle

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- # ltfueakbw
- # pct
- # potentium
- # random
- # s01-chn-secret

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last moves of EU and NATO

USA_Hamacher 14:39
Bild Move 4.jpg



Daniel Bendel 14:52
real american eagle
EAGLE.jpg



Message #bls2019-2turn04



Screenshot Moves

MWG Kalining...
Thorsten Kodalle

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- # 005law
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- # ltfueakbw

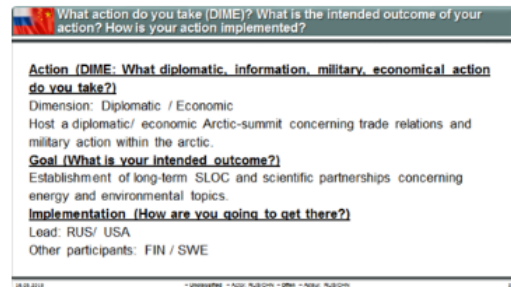
#bls2019-2turn04

☆ | 31 | 0 | Add a topic

Daniel Bendel 14:38

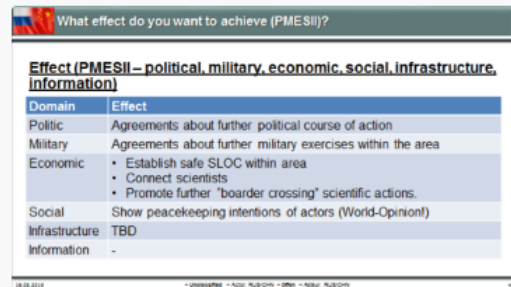
1/3

image.png



14:38 2/3

image.png



3/3

image.png



What action do you take (DIME)? What is the intended outcome of your action? How is your action implemented?

Action (DIME: What diplomatic, information, military, economical action do you take?)



What effect do you want to achieve (PMESII)?

Effect (PMESII – political, military, economic, social, infrastructure, information)

Domain	Effect
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<https://de.sputniknews.com/politik/20190121323666468-arktis-konflikt-prognose/> 21.01.2019

last moves of EU and NATO

MWG Kalining... ▾ 🔔

- Thorsten Kodalle
- luueakdw
- pct
- potentium
- # random
- s01-chn-secret
- s01-rus-chn-secret
- s01-rus-secret
- s02-eu-fra-ger-secret
- s02-eu-secret
- s02-fra-secret
- s02-ger-secret
- s03-gbr-secret
- s03-nato-gbr-secret
- s03-nato-secret
- s04-tur-secret
- s04-usa-secret
- s04-usa-tur-secret
- s05-bsp-secret
- s05-bsp-swe-secret**

s05-bsp-swe-secret

☆ | 11 | 0 | Add a topic

Effect (PMESII – political, military, economic, social, infrastructure, information)

	Effect
Political	
Military	Information is acquired about the troop movements, abilities, status and structure as well as general knowledge about RUS and CHN. This information will be shared with NATO.
Economic	VIP day is slightly harassed which results in less arms deals for RUS.
Social	
Infrastructure	
Information	Better understanding about RUS and CHN TTPs

08:18 image.png ▾

BSP Rational and reasoning: Why do you think with this would?

Rational

1. Fishing boats are plenty in the area
2. EW-Equipment required can be easily fitted or operated from GOTLAND
3. It's a good way to test our own EW capabilities
4. VIP day will be harassed by blocking important frequencies, jamming GPS signals or Radar and manipulating radio transmission. BSP has Russian speaking personnel
5. If the VIP day can be affected international arms buyer might be inclined to buy less than they normally would. With luck the S-400 demonstration will be botched.
6. No kinetic attacks, involvement can be denied or kept below threshold

Sources

- <https://www.defencejournal.com/2019/08/08/german-ew-capabilities/>
- <https://www.bbc.com/news/world-europe-41172940>
- <https://blog.killing.com/2018/06/06/jamming-electronic-warfare/>



SWE - Hüttmann 12:37

@Anna-Maria Praks thank you for the insights.

There has been an offer by RUS to BSP to engage in a long lasting oil and gas deal at very favorable conditions for BSP. What is your perspective towards this? I think its damaging towards our western allies and our position in total to become



Anna-Maria Praks 20:20

I don't know what is the official political statement from each BSP country on that issue. The political situation is rather fuzzy at the moment, at least in Estonia. But noone takes Russian offers seriously. We know what happened with Ukraine. Russia makes time after time reasonable and tempting offers, in the next moove hits the knife to the back. If BSP countries refuse these proposals, then Russia blames them for not playing along and makes a huge political drama out of it. We have long history, over centuries, having Russia as a neighbour. It's always the same game. No matter on what topic. Back to energy: Independence from Russian energy is essential to survive. Full stop.

turn5five2
turnfive1
turnfour1



Thorsten Kodalle 20:25

Thank you 👍 for your support @Anna-Maria Praks I just read a book on Liberalism-Nationalism-Realism. And you just made the perfect argumentation along the lines of Realism 🙌
Thanks 👍 a lot 😊👍

BSP MOVE 2 - SECRET

Action:
Information

Goal:
Covert surveillance of the RUS exercise as well as SIGINT. The VIP-Day will be disturbed by failures in communications.

Implementation:
Using fishing boats packed with Electronic Warfare Equipment close to the exercise areas + a jamming signal is send on VIP Day to mess with the communication channels.

15.09.2019

- Unclassified - Actor: BSP/SWE - Offen - Akteur: BSP/SWE

1



After Action Review



Screenshot AAR

MWG Kalining...
Thorsten Kodalle

Jump to...

All Unreads

Threads

Shared Channels

Channels

00-sme-coordination

000-scenario-rules

000faq

000fun

000migration-refugees

000terror

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aar2019-3thirdrun

africa

announcements

balkan

basdifo

bls2019-2

bls2019-2turn00

bls2019-2turn01

#aar2019-2secondrun

17 | 0 | Add a topic

joined #aar2019-2secondrun.

Thorsten Kodalle 14:41

Thorsten Kodalle

In Game: Did you like playing your actor? Very much (😊), yes (😄), somewhat (👉), no (😞), not at all (😫)

Posted in #aar2019-1firstrun | Feb 8th | View message

😊 5 😄 2 👉 2 🗨️ 2

Thorsten Kodalle

In Game: Do you think you played your actor (more or less) authentic? Very much (😊), yes (😄), somewhat (👉), no (😞), not at all (😫)

Posted in #aar2019-1firstrun | Feb 8th | View message

😊 3 🗨️ 3 😄 5

Thorsten Kodalle

In Game: Did you find it easy to develop a strategy for reaching your strategic goals? Very easy (😊), easy (😄), manageable (👉), difficult (😞), very difficult (😫)

Posted in #aar2019-1firstrun | Feb 8th | View message

😊 9 🗨️ 1 😄 2

14:42 Thorsten Kodalle

Meta Level: Do you think this Matrix Wargame is a very good (😊), a good (😄), an ok (👉), a bad (😞), a very bad (😫) example of competence oriented training?

Posted in #aar2019-1firstrun | Feb 8th | View message

😊 8 🗨️ 5

14:42 Thorsten Kodalle

Meta Level: Would you recommend to train with this Matrix Wargame? Yes (😊), yes (😄), somewhat (👉), no (😞), not at all (😫)

Posted in #aar2019-1firstrun | Feb 8th | View message

🗨️ 2 😄 6 😊 3

14:42 Thorsten Kodalle

Meta Level: Would you recommend to train with this Matrix Wargame? Yes (😊), yes (😄), somewhat (👉), no (😞), not at all (😫)

Posted in #aar2019-1firstrun | Feb 8th | View message

🗨️ 5 😄 6

Message #aar2019-2secondrun

AAR Facilitator Questions

Please answer questions with the emoticons assigned

Thorsten Kodalle

In Game: Did you find it easy to develop a strategy for reaching your strategic goals? Very easy (😊), easy (😄), manageable (👉), difficult (😞), very difficult (😫)

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😊 9 🗨️ 1 😄 2

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😊 8 🗨️ 5

22.09.2019

– Unclassified – Lecturer: LTC (GS) Thorsten Kodalle – Offen – Dozent OTL i.G. Thorsten Kodalle

21

Conclusion

Hosting a matrix game (especially a matrix wargame) in a web 2.0 collaboration tool (like slack) enriches the playing experience and enhances the game-based learning experience, especially due to the complete documentation.



Way Ahead



„Cyber Security Serious Game Workshop“

„Cyber Security Serious Game Workshop“

**NATO/GIDS Workshop „Multi-Domain Future
Cyber Wargaming“
18.-20. June 2019**

Reflections, Results, AAR



Agenda and Resume: Merging Academic Excellence and Military Professionalism

**Academic
Excellence**



and Wednesday

08:00 – 09:00

09:00

awesome and agile



**Military
Professionalism**

1:00

Multi-Domain Future Urban Wargame

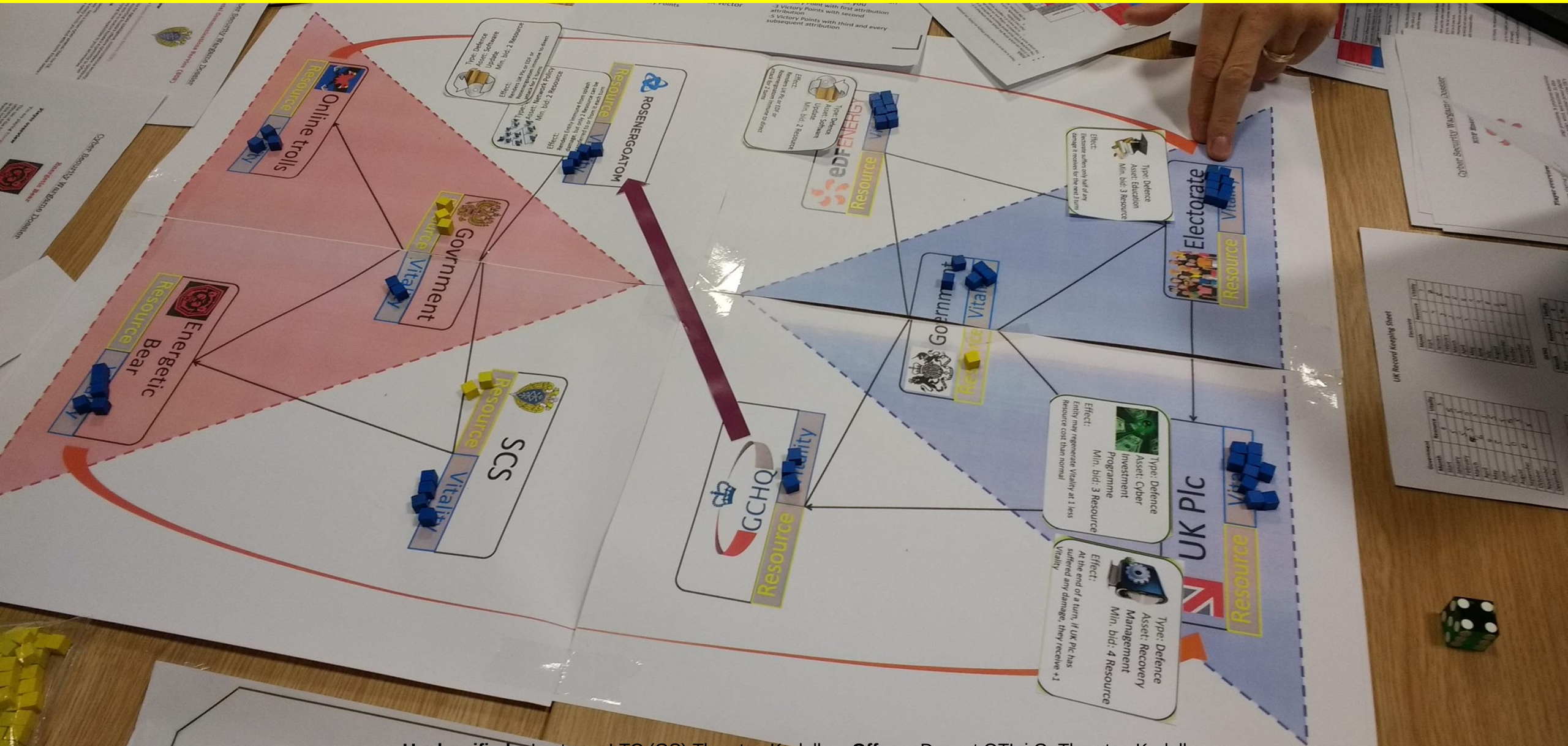
DEFENCE/RESILIENCE"



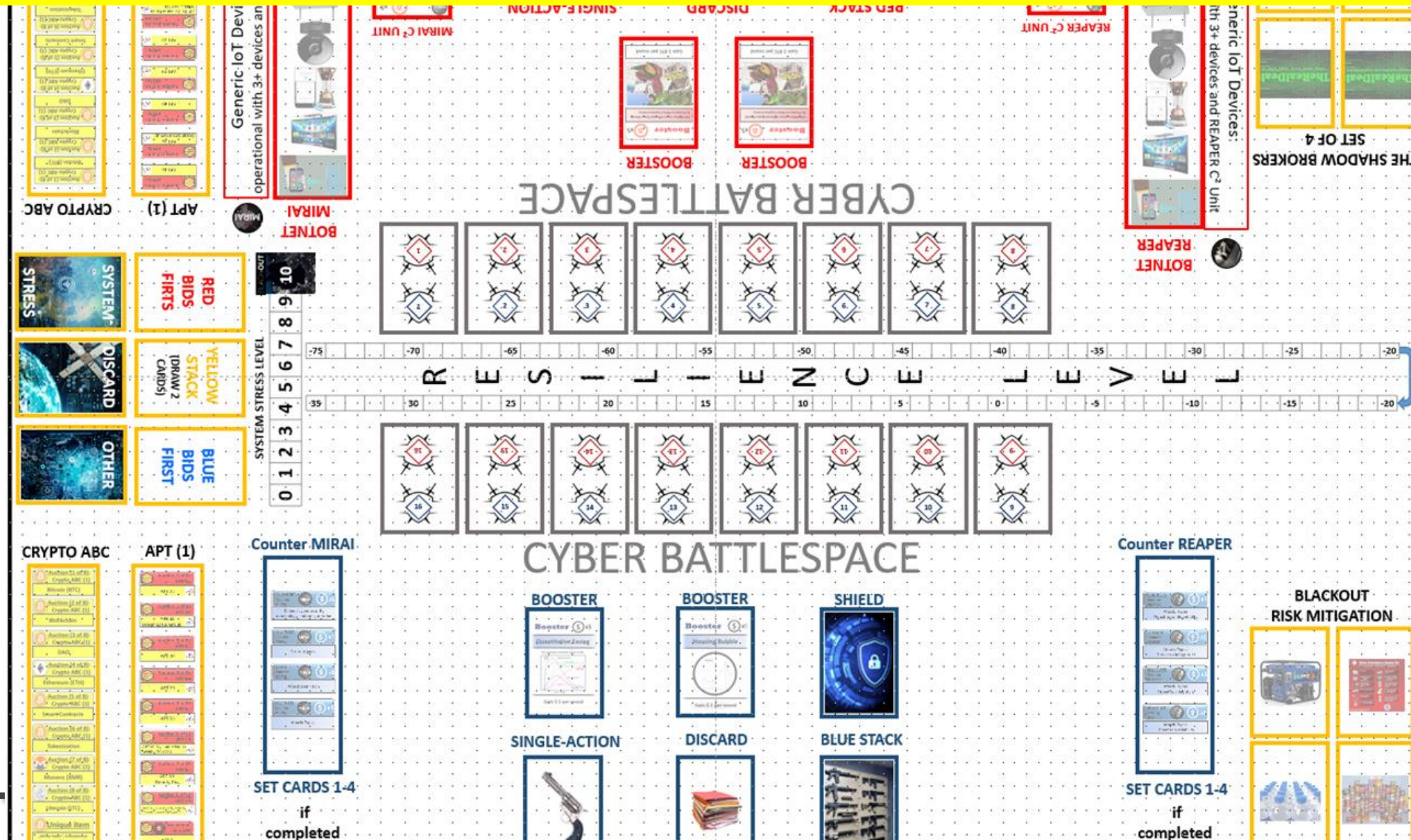
Multi-Domain Future Urban Wargame

Information, Cyber, Electronic Warfare and
Land Manoeuvre

Cyber Security Strategy Boardgame



Cyber Resilience Card Game



Gain 2RP, but only 1RP if attacker already played "Malware-based phishing" Protects against malware infection



Botnet: Reaper C² Unit
Collect 3+ IoT devices



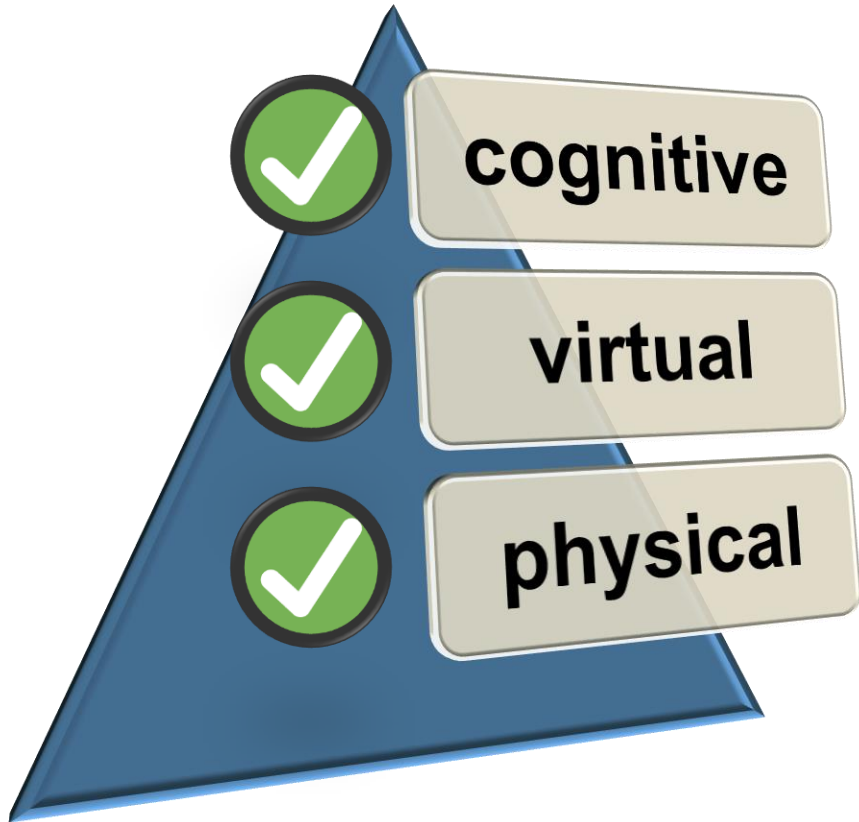
Rent out Reaper for 1 BTC per round
OR IoT security storm: -1 RP per device

Beginner

Intermediate

Expert

Cyber Domains



Cyber Levels



“We may never know the right answers,
but gaming can sometimes help us learn to
ask the right questions.”

- Peter Perla