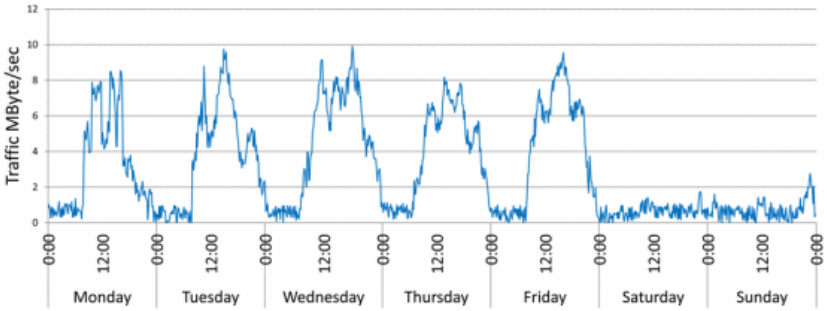
Minireferáty II

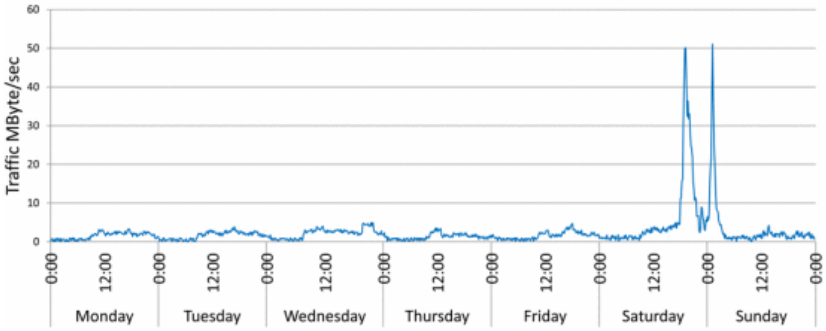
2024

- technika, doprava, stavby
  Oslej, Chrvala, Tomoszek, Myslikovjan, Válková, Rádl
- Země, počasí
  Štefková, Louda, Nosáľ
- umírání, nemoci
  Zemanová, Murár, Šmilňáková, Milostná
- evoluce, agenti, lidi
  Lubojacký, Vyhnálek, Mišák, Pekarová, Pavelka, Tribulíková

Mobile Networks Traffic Prediction



(a) City scenario - One week traffic profile



(b) Stadium scenario - One week traffic profile

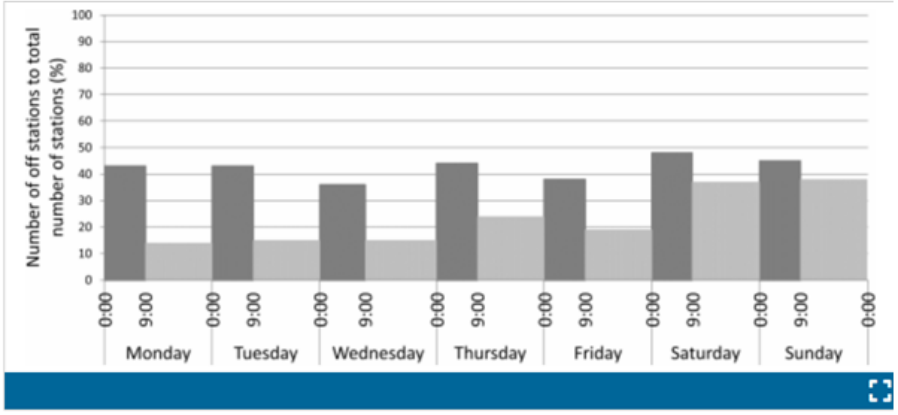
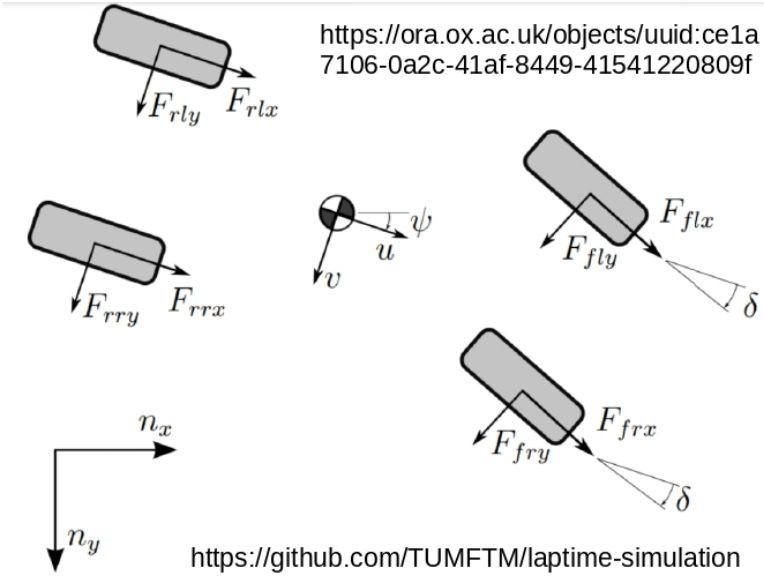


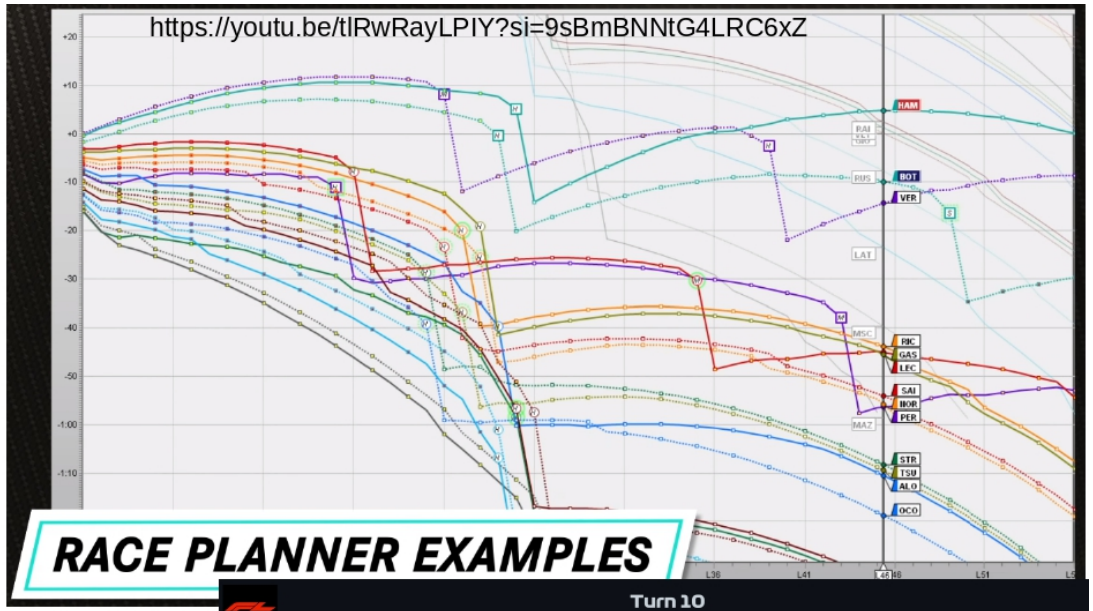
Fig. 11.
The possible daily power saving presented as the percentage of deactivated stations before and after 9:00 am everyday

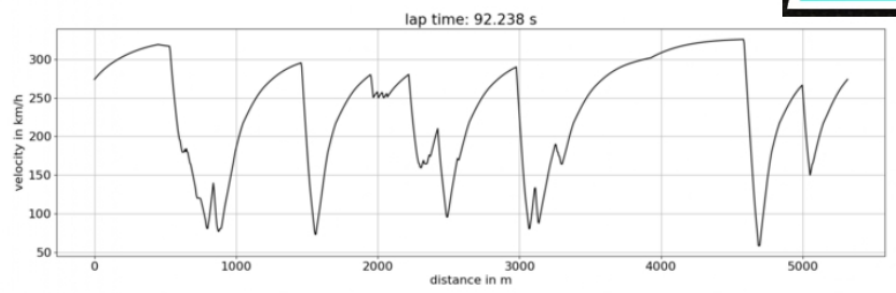
Zdroj: https://ieeexplore.ieee.org/abstract/document/6899228

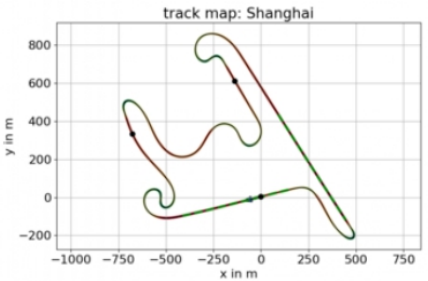


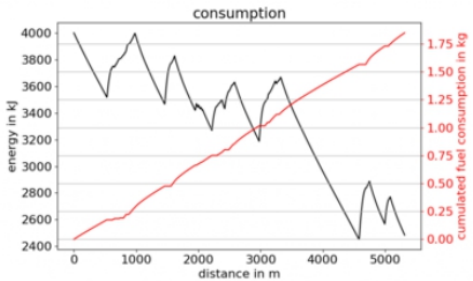
https://ora.ox.ac.uk/objects/uuid:ce1a7106-0a2c-41af-8449-41541220809f

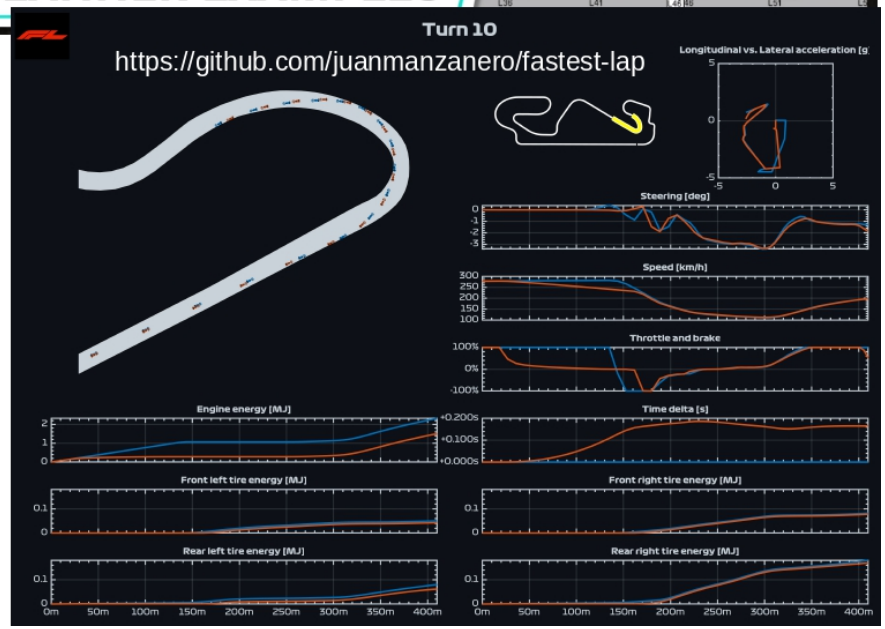
https://github.com/TUMFTM/laptime-simulation



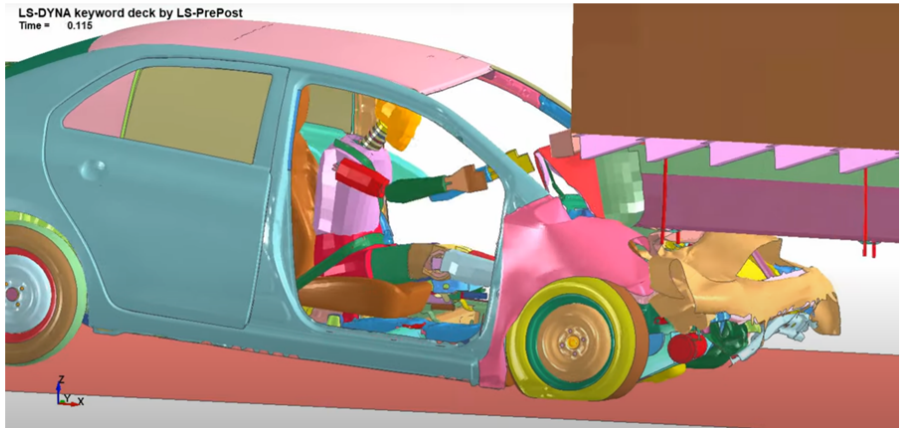


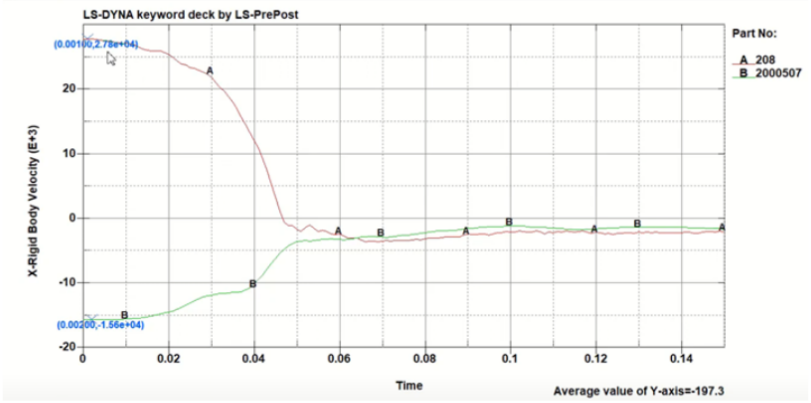


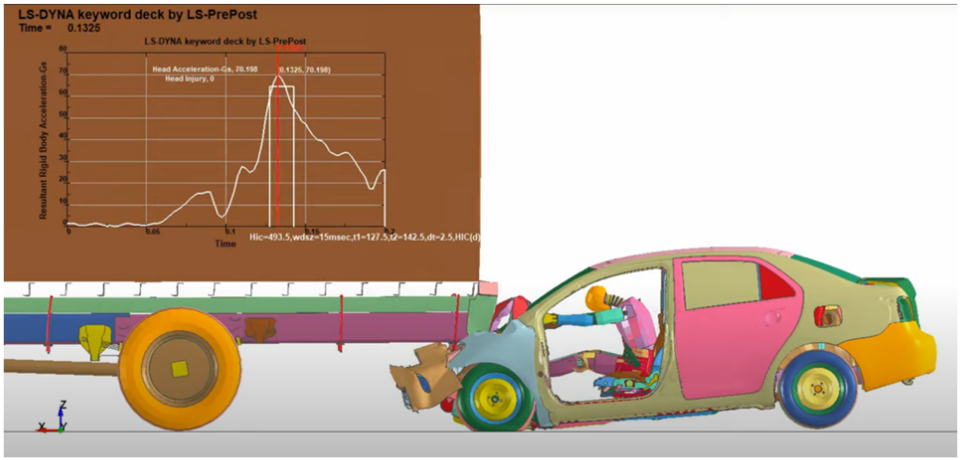


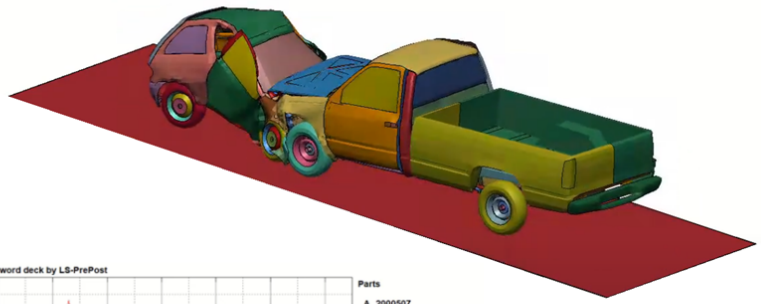


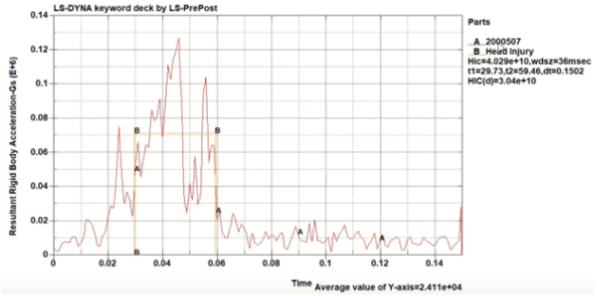
Al-Bahash, Z. F., Ansari, M. N. M. and Shah, Q. H. (2018) 'Design and simulation of a rear underride protection device (RUPD) for heavy vehicles', International Journal of Crashworthiness, 23(1), pp. 47–56. doi: 10.1080/13588265.2017.1302040.







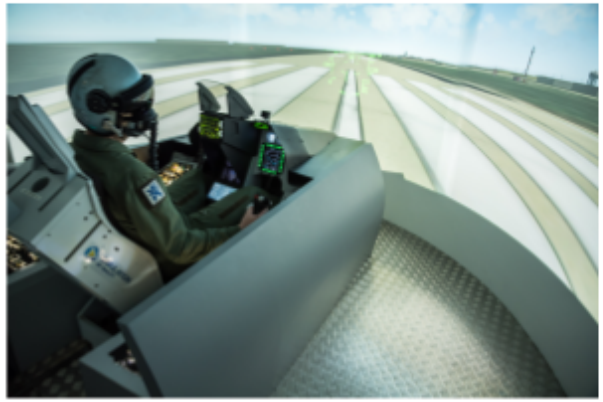


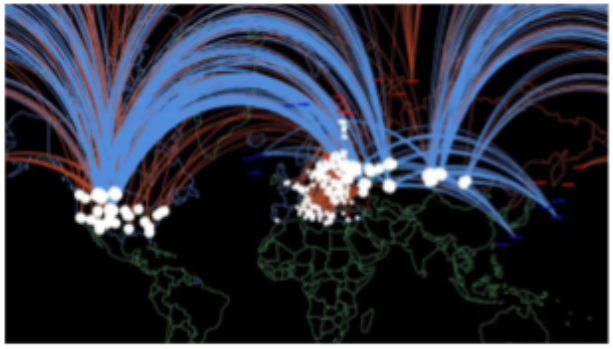


Soltani, M. et al. (2017) 'Crashworthiness of G4(2W) guardrail system: a finite element parametric study', International Journal of Crashworthiness, 22(2), pp. 169–189. doi: 10.1080/13588265.2016.1243636.

Vojenská simulace

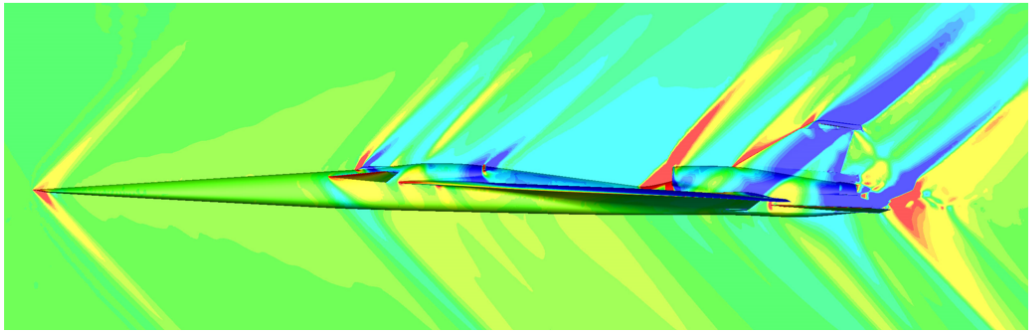
- https://mocr.army.cz/informacni-servis/zpravodajstvi/hranicti-cvici-naplno-navzdory-covidu--diky-modernimu-simulatoru-strelby-226521/
- https://cs.wikipedia.org/wiki/Vojensk%C3%A1_simulace
- https://dsiac.org/models/afsim/
- https://www.digitalcombatsimulator.com/en/

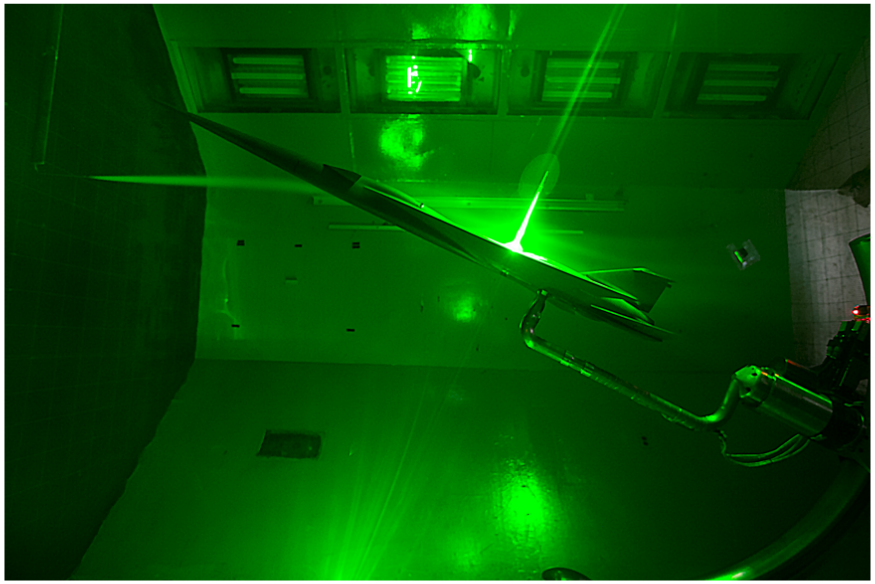


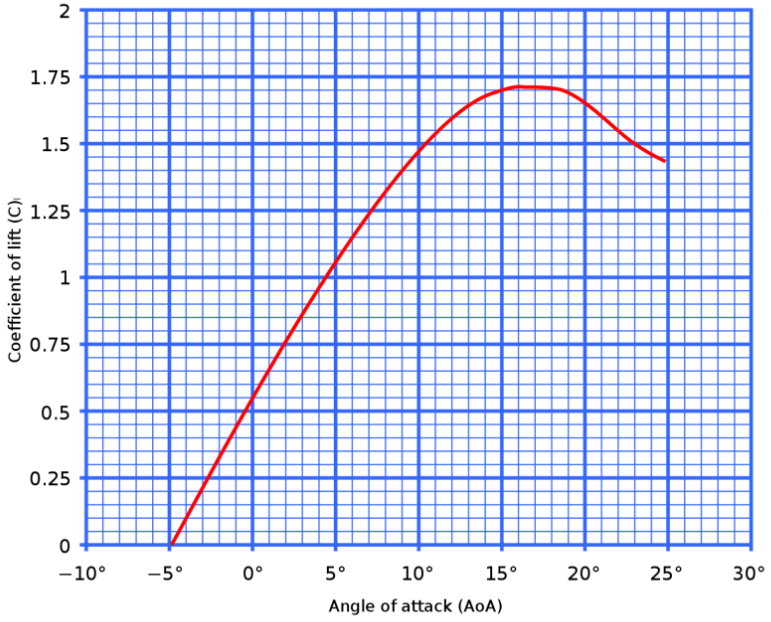


Wind Tunnel

https://www.nasa.gov/aeronautics/x-59-quesst-model-flies-the-simulated-skies-at-nasa-langley-wind-tunnel-testing-session/
https://en.wikipedia.org/wiki/Wind_tunnel
https://en.wikipedia.org/wiki/Angle_of_attack



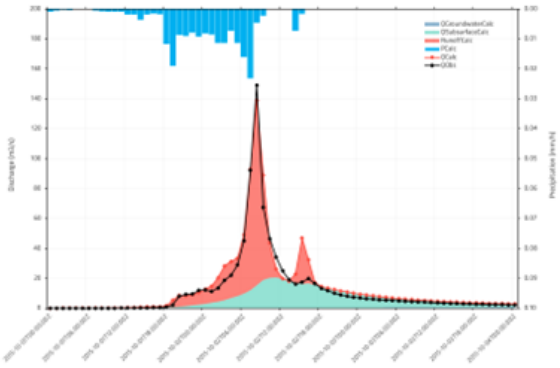


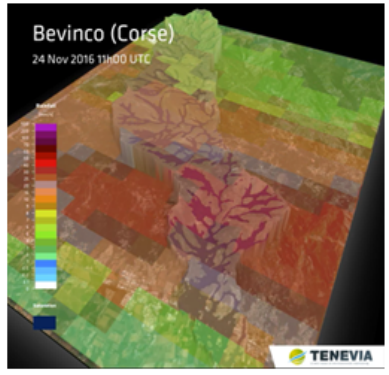


https://www.natuurmonumenten.nl
/natuurgebieden/waterloopbos

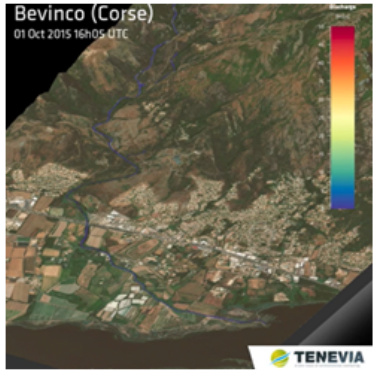
https://youtu.be/SFkoLYrJGCM

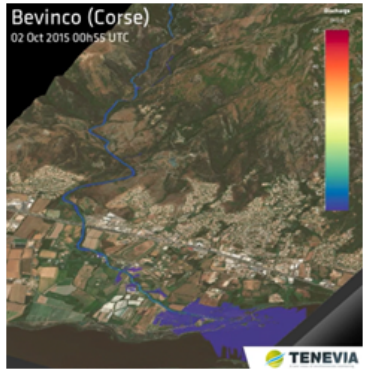
HYDROLOGICKÝ SIMULAČNÍ A PŘEDPOVĚDNÍ MODEL

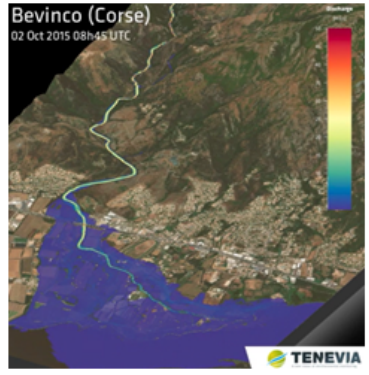


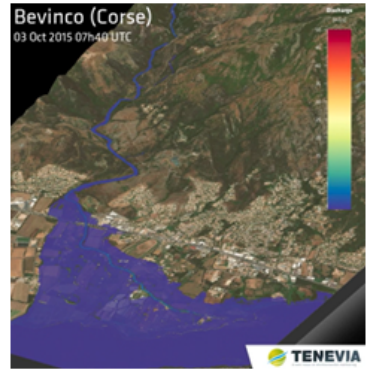


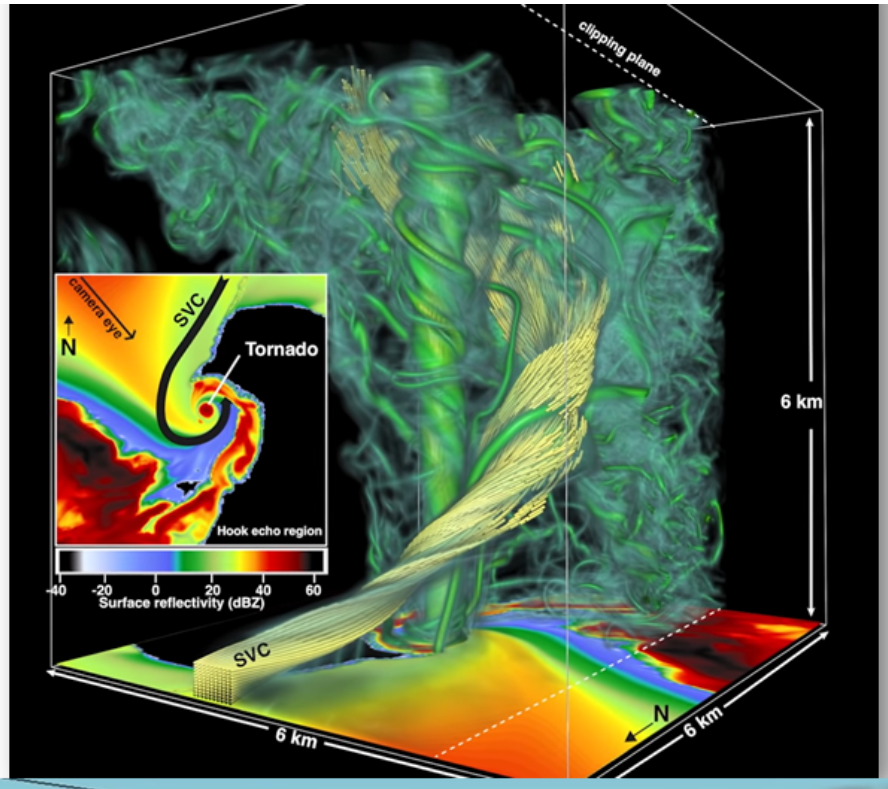
https://www.tenevia.com/en/simulator/hydrocore-en/



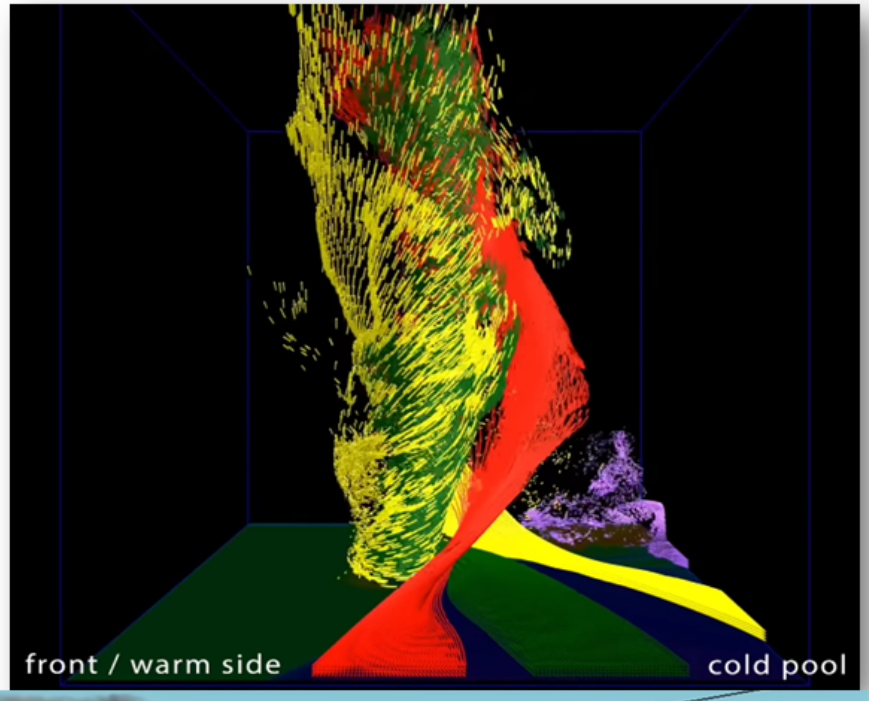


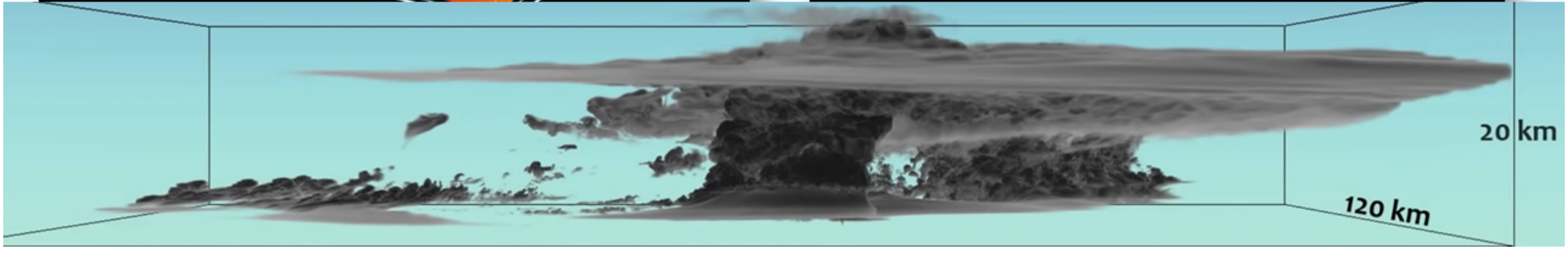




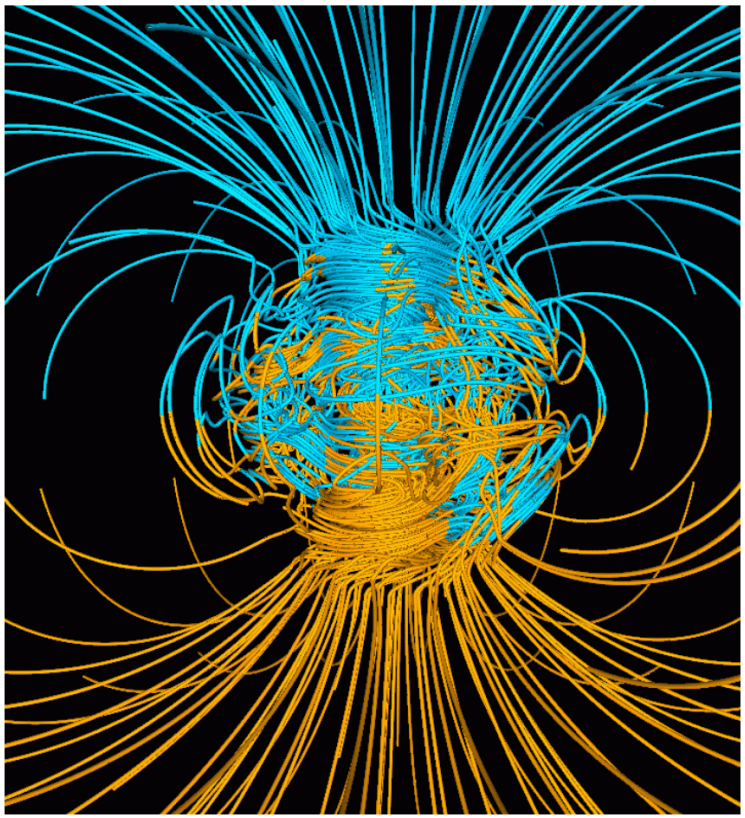


https://www.youtube.com/watch?v=e2wbn3ivHwc

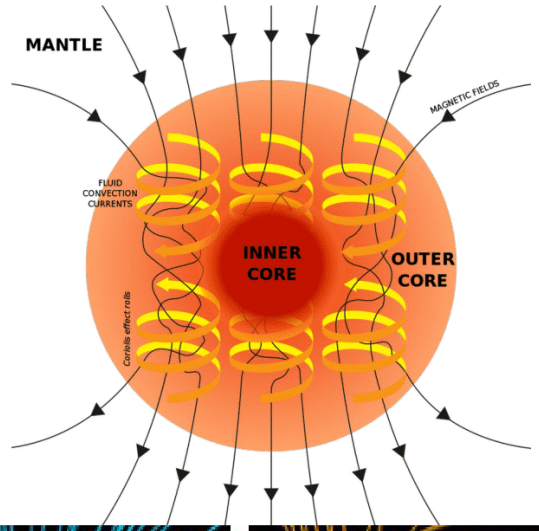


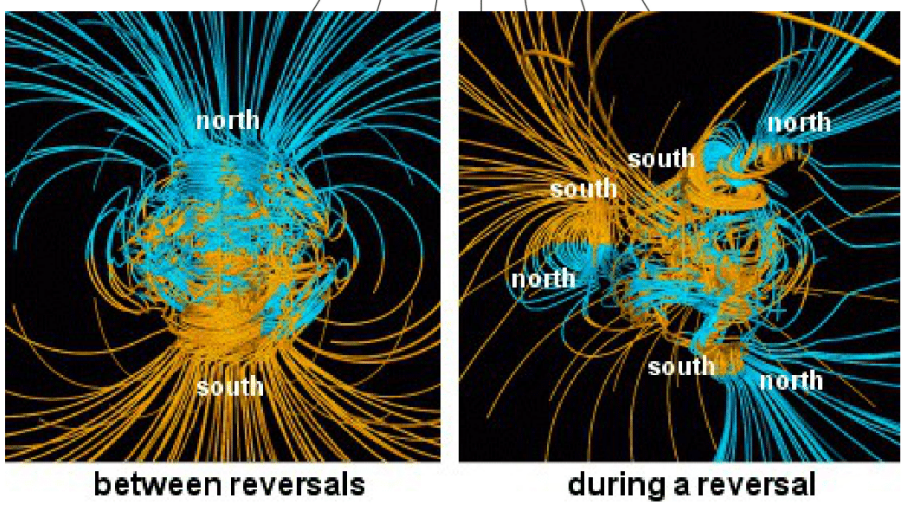


Modeling GeoDynamo theory

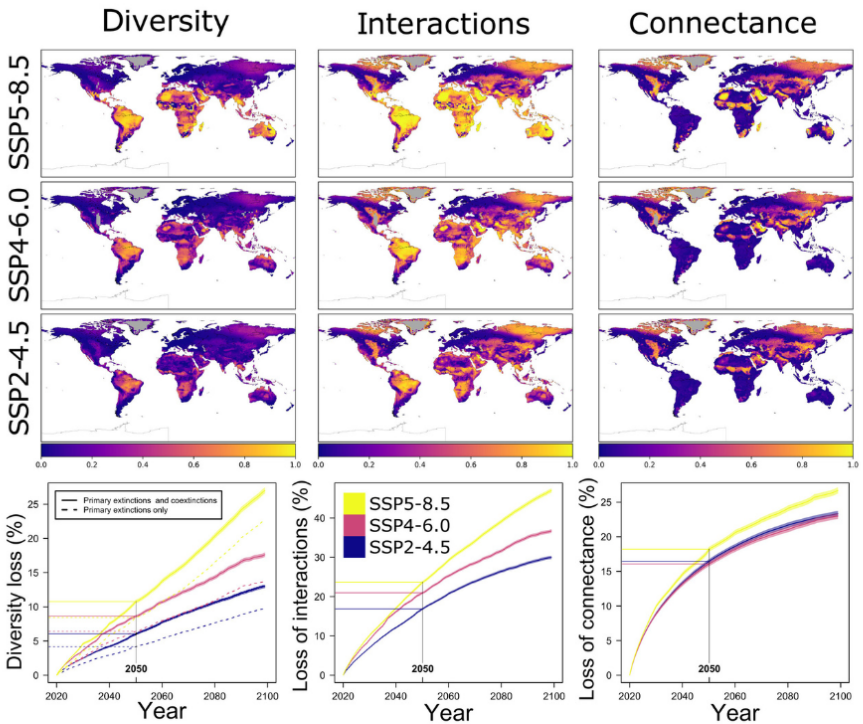


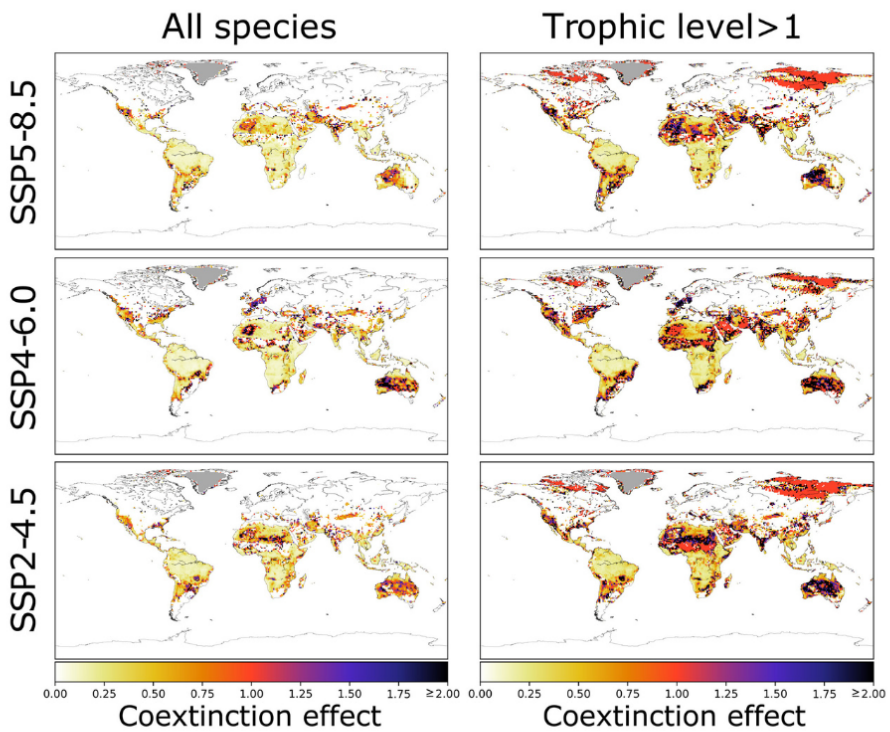
https://www.science.org/doi/10.1126/science.288.5473.2007





Coextinctions dominate future vertebrate losses from climate and land use change.
Strona, G., & A. Bradshaw, C. J. (2022).
Science Advances. https://doi.org/abn4345

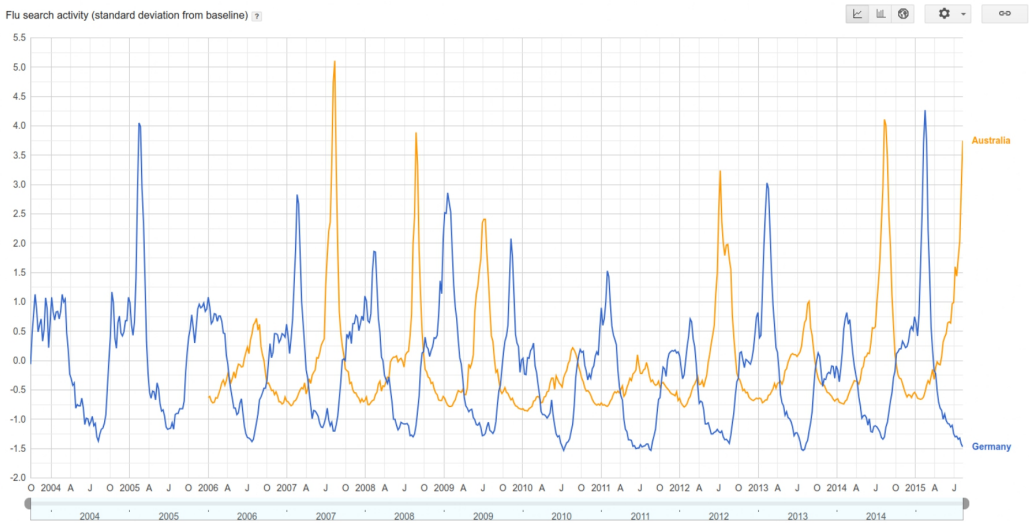




Google Flu Trends

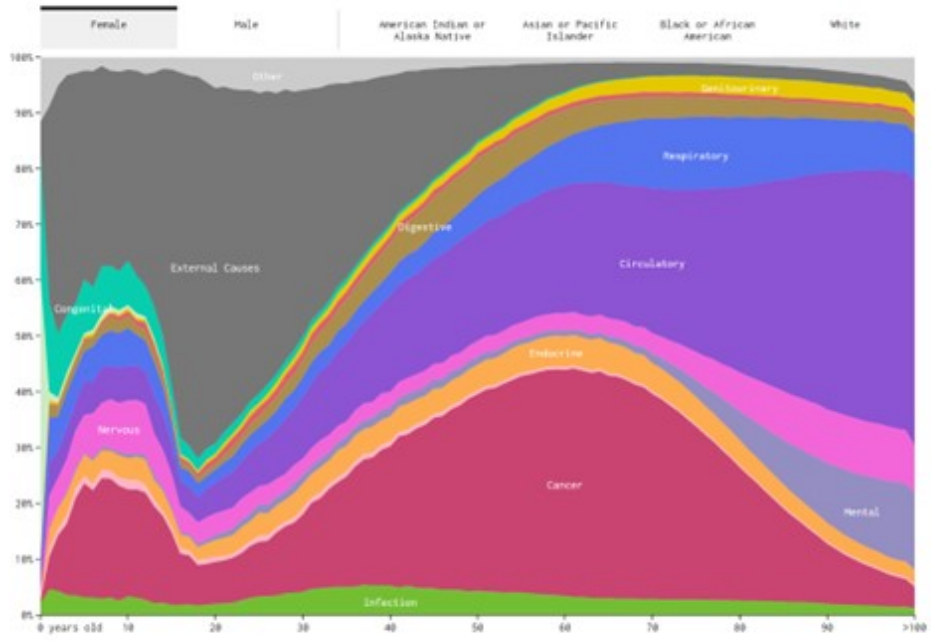
	GFT	ILIp
Overall	0.364 (0.94, [.02–.35])	0.143(0.4, [0–0.09])
National	0.138 (0.24, [0–.17])	0.031 (0.05, [0–.04])
Region 1	0.101 (0.16, [.01–.14])	0.04 (0.1, [0–.04])
Region 2	0.515 (0.76, [.06–.67])	0.185 (0.39, [.01–.14])
Region 3	0.342 (0.4, [.07–.47])	0.066 (0.11, [.01–.08])
Region 4	0.282 (0.58, [.02–.21])	0.037 (0.1, [0–.03])
Region 5	0.147 (0.22, [.01–.19])	0.024 (0.04, [0–.03])
Region 6	0.714 (2.18, [.03–.68])	0.181 (0.38, [.01–.17])
Region 7	0.601 (1.43, [.02–.4])	0.112 (0.29, [.01–.09])
Region 8	0.137 (0.31, [.01–.15])	0.042 (0.07, [0–.07])
Region 9	0.695 (0.88, [.07–.9])	0.681 (0.89, [.05–.92])
Region 10	0.337 (0.53, [.05–.39])	0.17 (0.37, [0–.15])
2009/10	0.274 (0.47, [.03–.26])	0.191 (0.45, [.01–.15])
2010/11	0.545 (0.97,[.03–.56])	0.181 (0.44, [0–.12])
2011/12	0.353 (0.45, [.06–.45])	0.158 (0.5, [0–0.07])
2012/13	5.847 (15.77, [.11–2.66])	0.175 (0.6, [0–0.08])
2013/14	0.29 (0.59,[.01–.33])	0.083 (0.21, [0–0.05])
2014/15	0.338 (1.54,[.01–.18])	0.119 (0.33, [0–0.08])

https://doi.org/10.1371/journal.pcbi.1007258.t001

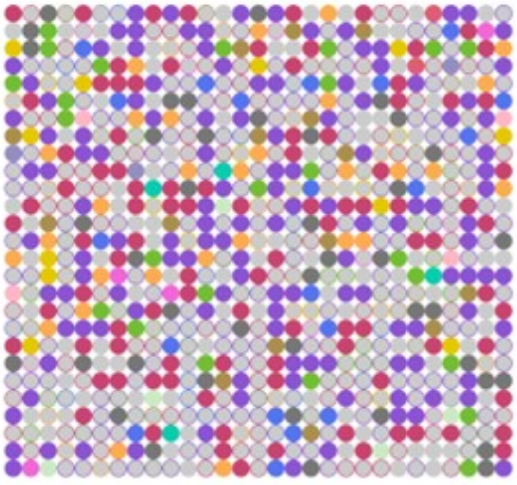


https://journals.plos.org/ploscompbiol/article%3Fid=10.1371/journal.pcbi.1007258
https://time.com/23782/google-flu-trends-big-data-problems/
https://www.google.com/publicdata/explore?ds=z3bsqef7ki44ac_#!ctype=l&strail=false&bcs=d&nselm=h&met_y=flu_index&scale_y=lin&ind_y=false&rdim=country&idim=country:DE:AU&ifdim=country&tstart=1064700000000&tend=1439071200000&hl=en_US&dl=en_US&ind=false

How you will die

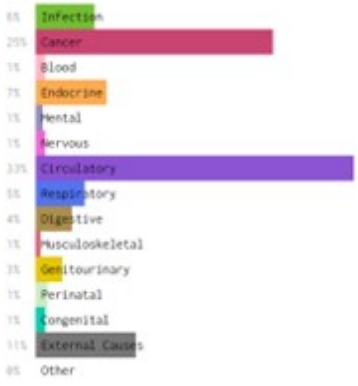


I am **male** **White** and currently **0** years old. LIVE

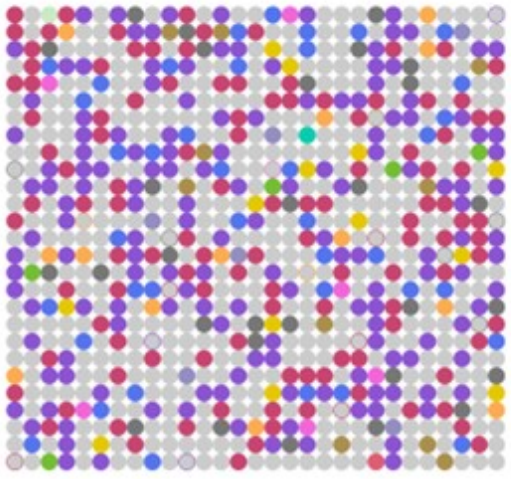


AGE OF DEATH	DIED SO FAR	STILL ALIVE
73 years	50%	50%

CAUSE OF DEATH SO FAR

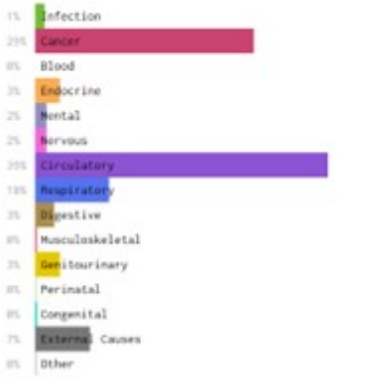


I am **male** **Asian** and currently **0** years old. LIVE



AGE OF DEATH	DIED SO FAR	STILL ALIVE
85 years	50%	50%

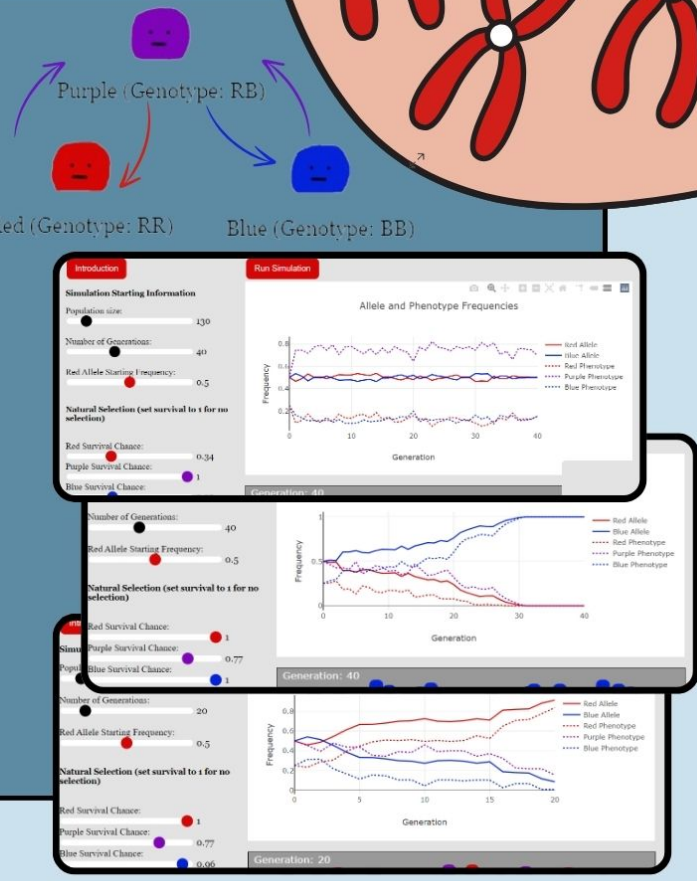
CAUSE OF DEATH SO FAR



https://flowingdata.com/2016/01/05/causes-of-death
https://flowingdata.com/2016/01/19/how-you-will-die/

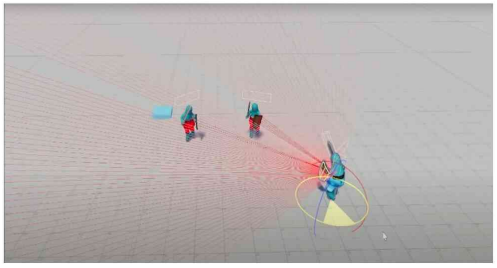
POPULATION GENETICS

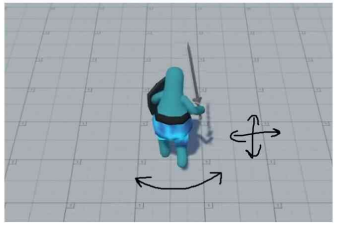
https://www.biologysimulations.com/population-genetics

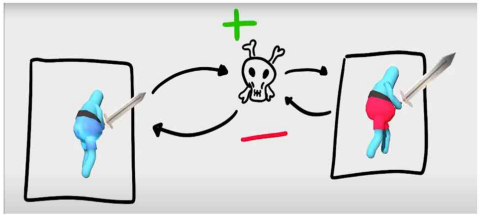


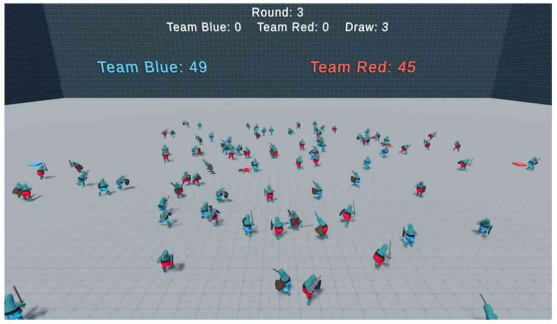
Evolution of Tactics

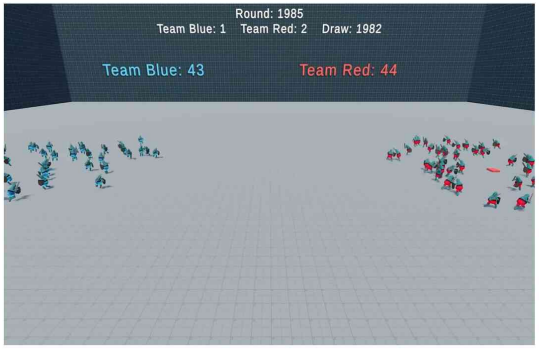
https://www.youtube.com/watch?v=YUm2X5Rdw3w

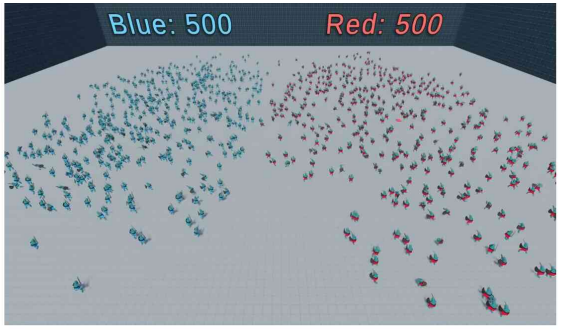


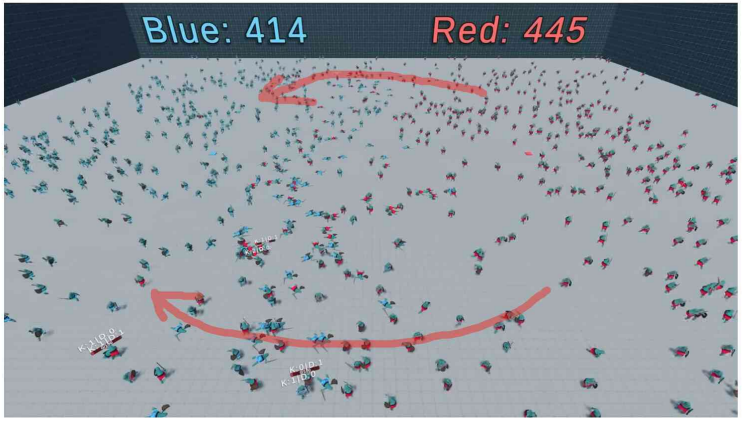


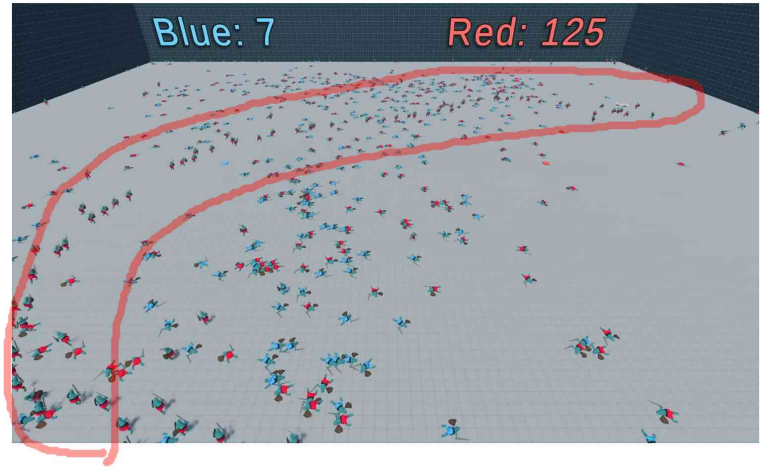


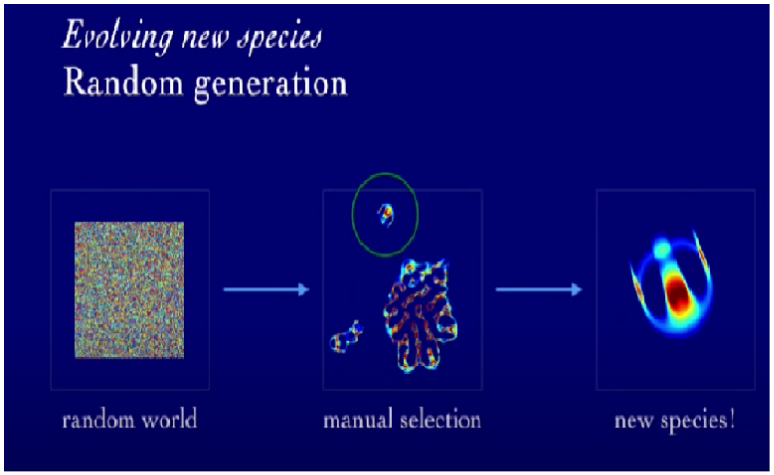




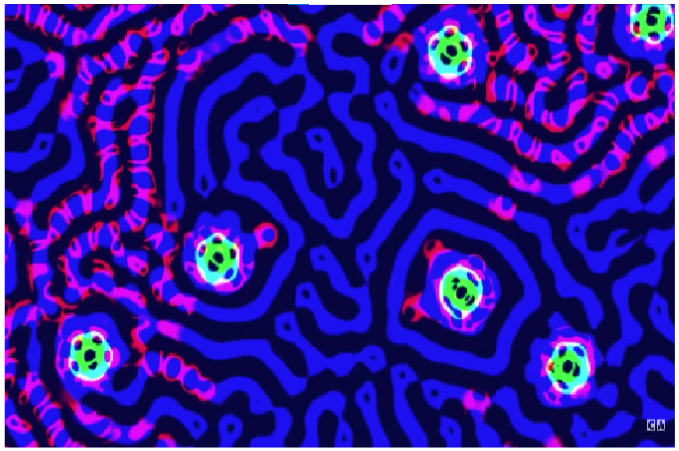


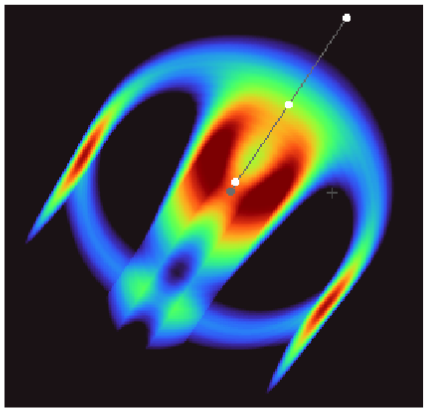




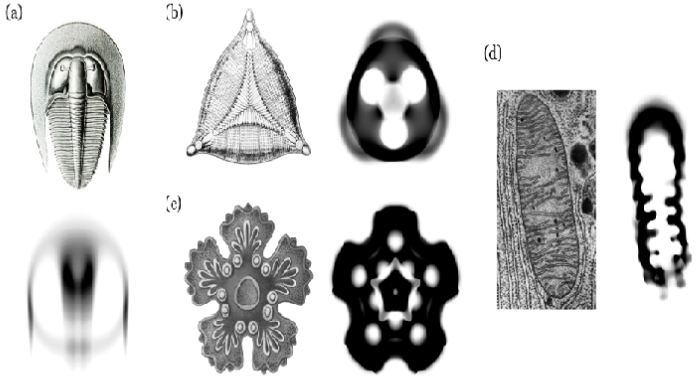


Lenia

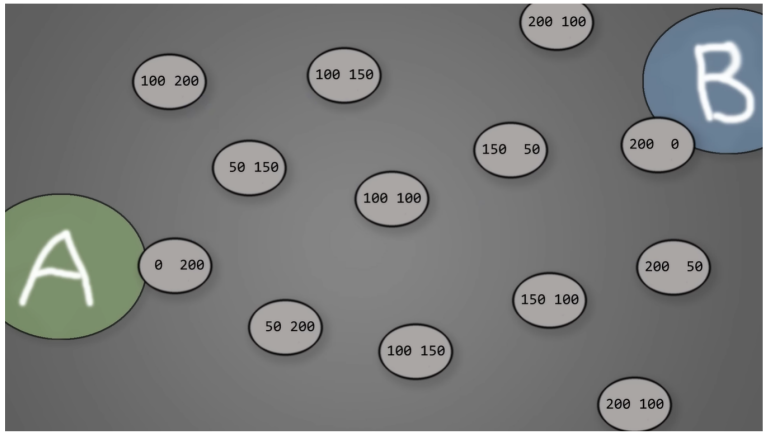


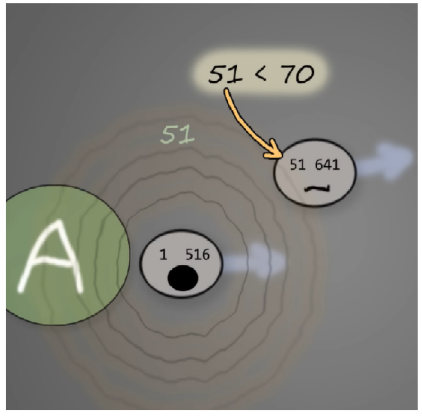


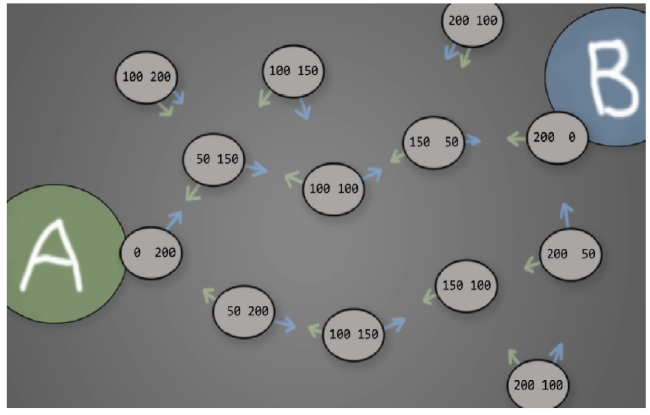
Bert Wang-Chak Chan



The Screaming agents simulation - Swarm Inteligence
https://www.youtube.com/watch?v=Yu7sF9rcVJY

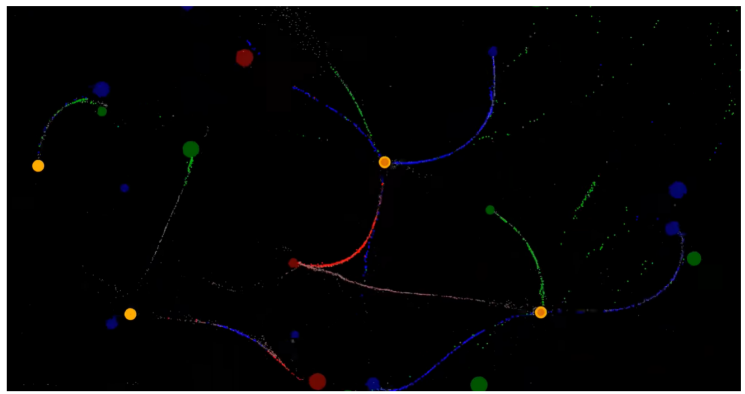


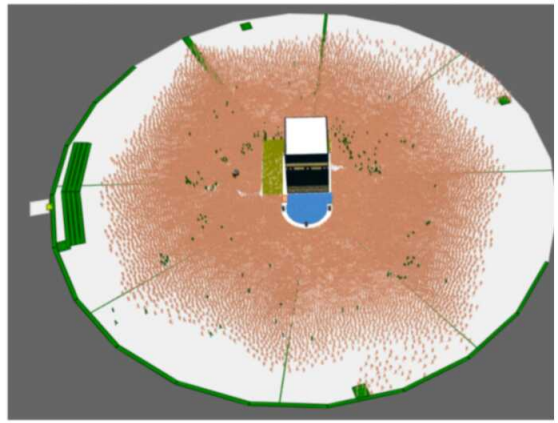


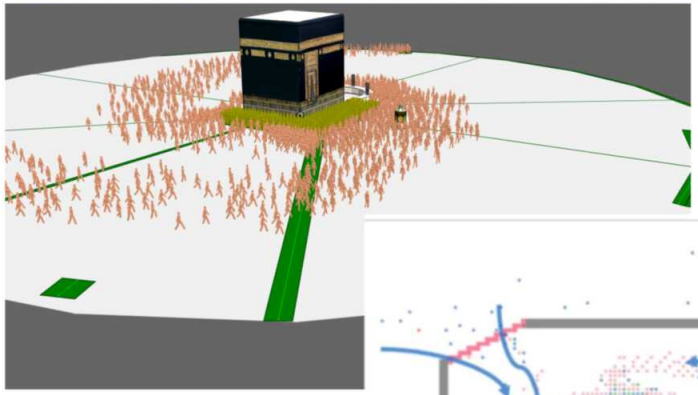


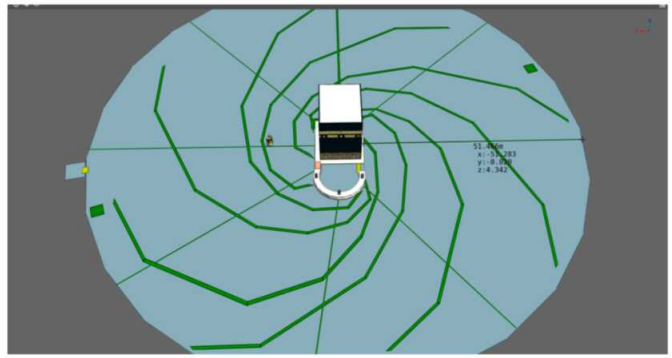
Screaming agents algo:

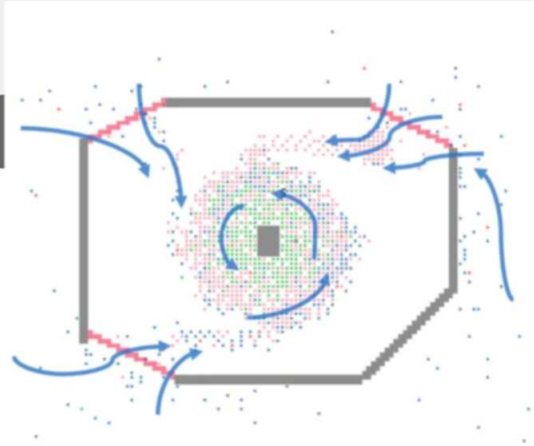
1. **Take a step and increase counters by 1**
2. **If agent touches one item:**
   - **2.1 Reset the corresponding counter**
   - **2.2 If this is agents desired destination:**
     - **2.2.1 Turn around**
     - **2.2.2 Change desired destination**
3. **Shout out the value of one of the counters + max shout distance**
4. **Listen to other agents are shouting**
5. **If agent hears value less than his counter**
   - **5.1 Update the counter**
   - **5.2 If this is the desired place go the direction of the shout.**

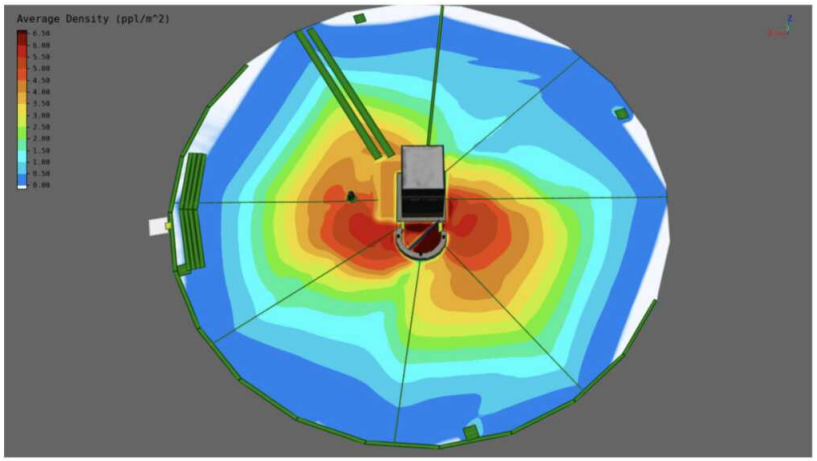








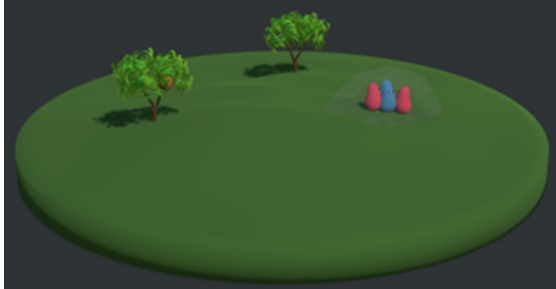


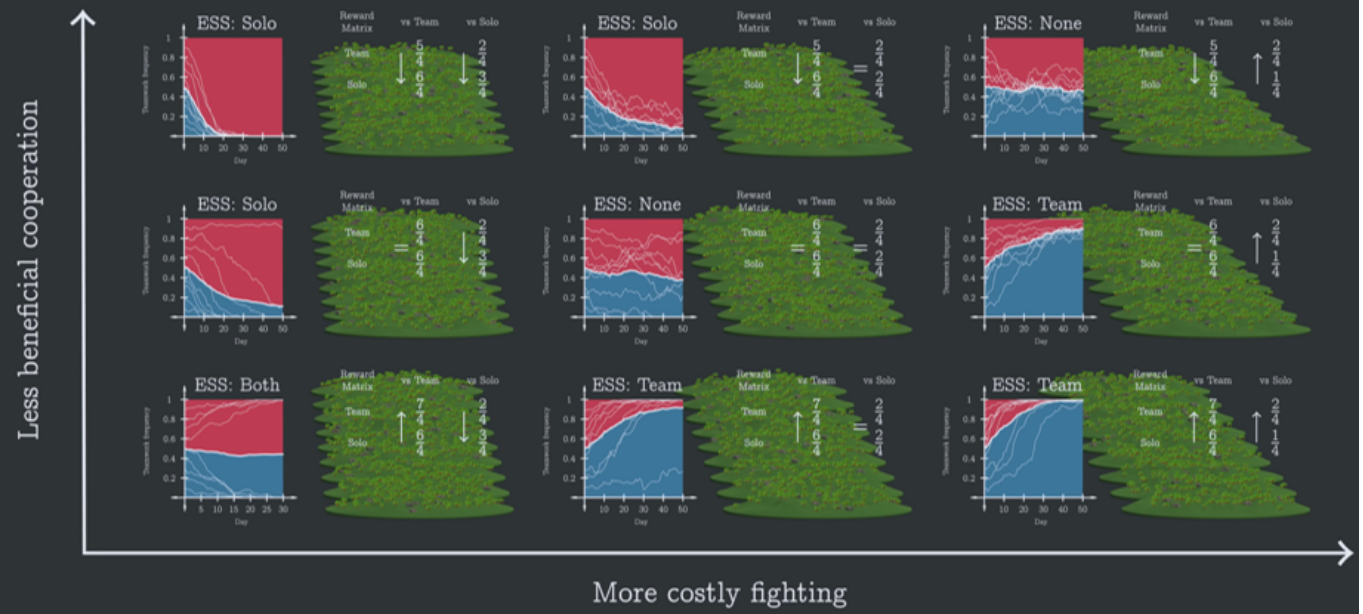


https://www.prweb.com/releases/umm_al_qura_university_s_research_team_completes_a_crowd_simulation_model_for_crowd_movement_in_the_holy_mosque/prweb14391201.htm

A strategy is an ESS IF It is a strong Nash with itself OR [It is a weak Nash with itself AND Others are not Nash with selves]

Energy Rewards	Own tree	vs Team	vs Solo
Team	2	$1\frac{3}{4}$	$\frac{1}{2}$
Solo	2	$1\frac{1}{2}$	$\frac{3}{4}$





https://www.youtube.com/watch?v=TZfh8hpJIxo

The third wave