



Network effects in a voluntary adoption paradigm

Jeroen Franssen - Allied Command Transformation

Allied Command Transformation - Innovation Branch

Innovative design and software solutions

Innovation Branch Mission: “To inform NATO capability requirements through Innovation to the Warfighters (ACO) and Warfare Developers (ACT)”

- IH offers a unique opportunity to **explore technology solutions** and validate those ideas before committing to the development of a production-level system.
- The IH is a team of experts (both military and civilian), with various industry backgrounds working within the NATO organization.
- Development of software and hardware solutions
- Focus on Rapid Adoption, Implementation and Delivery

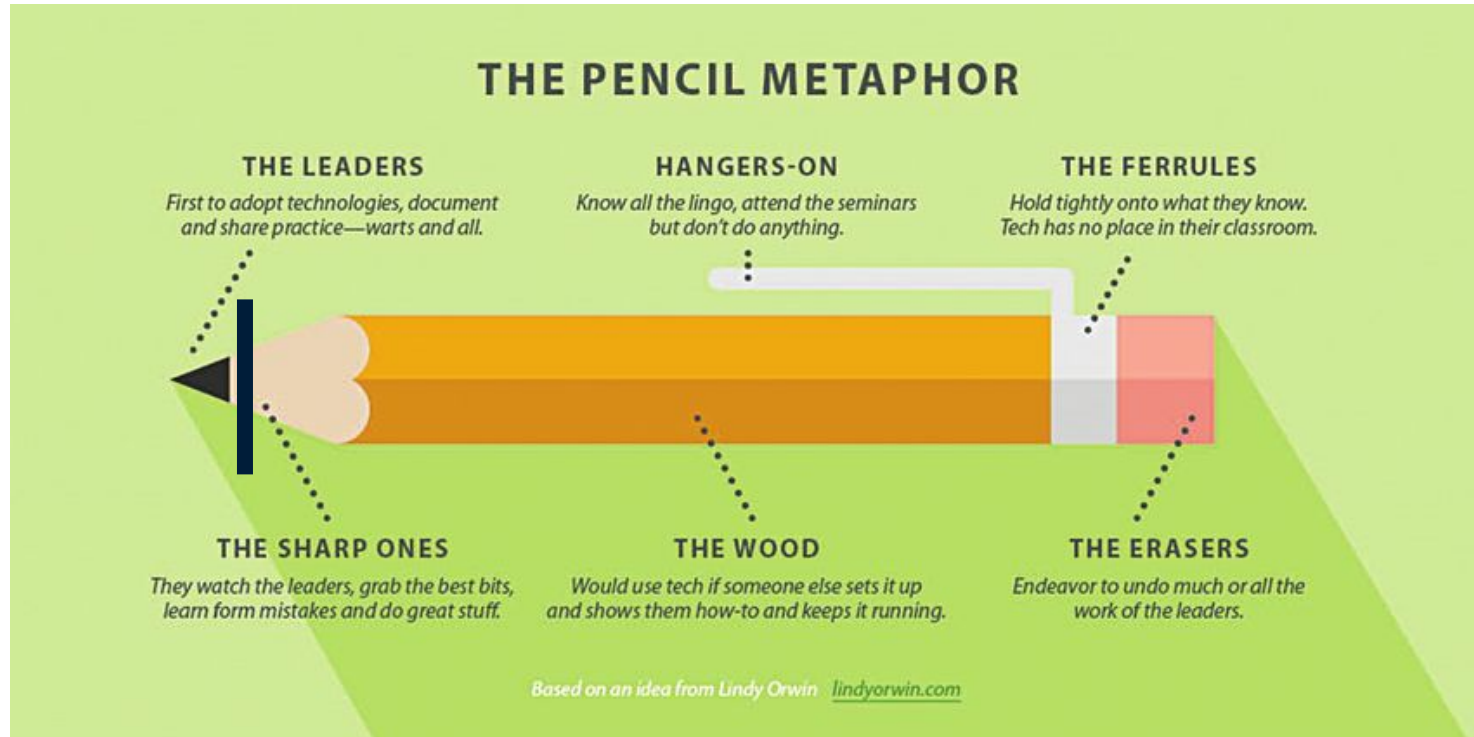
NATO Interoperable Instant Communication Environment



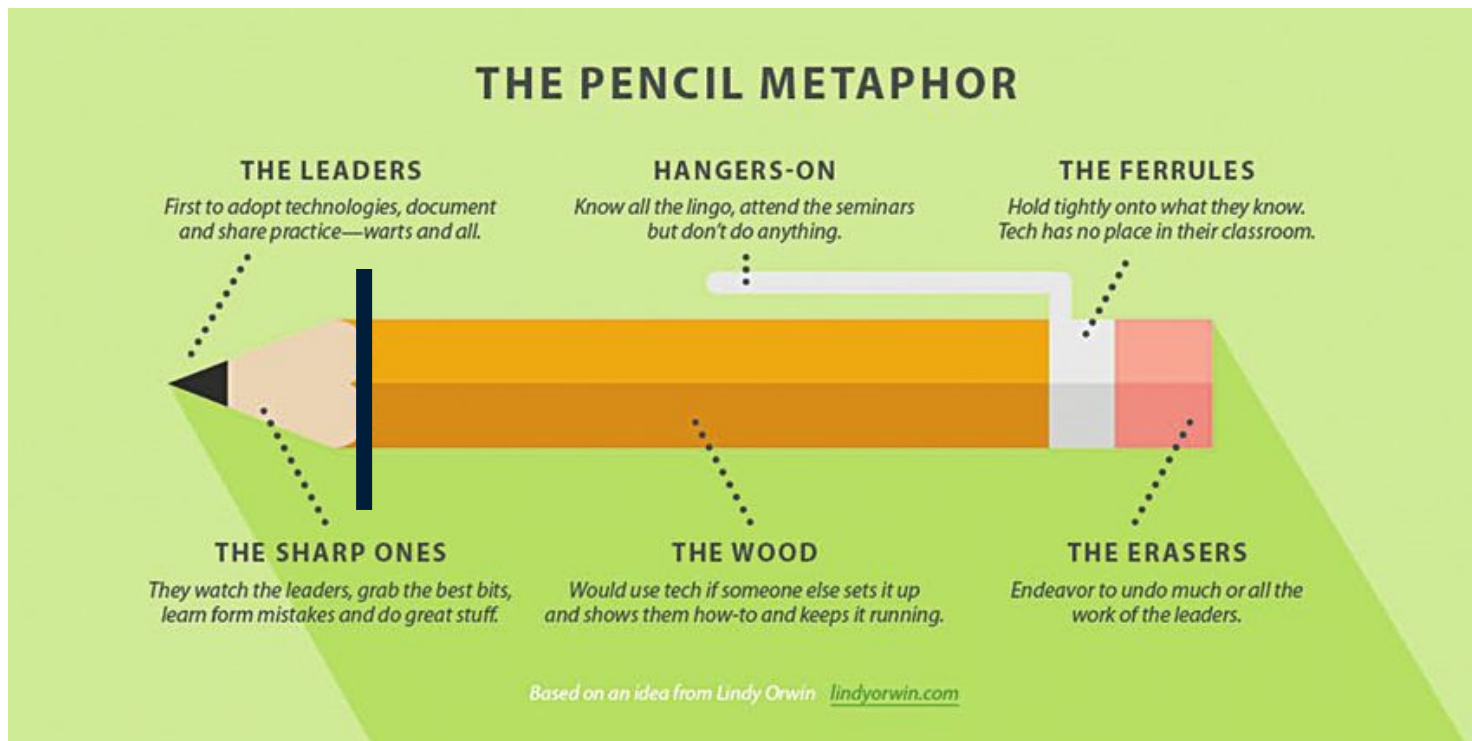
Network effects in economics

- Not some cool networking feature in telephone systems as one might assume
- Network effects occur when the value of a product/service increases for users as more people adopt it.
 - Positive feedback loop: More users → Higher utility → More users.
- Reed's Law: $\text{Value} \approx 2^{(n-1)}$, where n = number of groups (or communities)
- So: once you have a good amount of users, adoption should take... or not

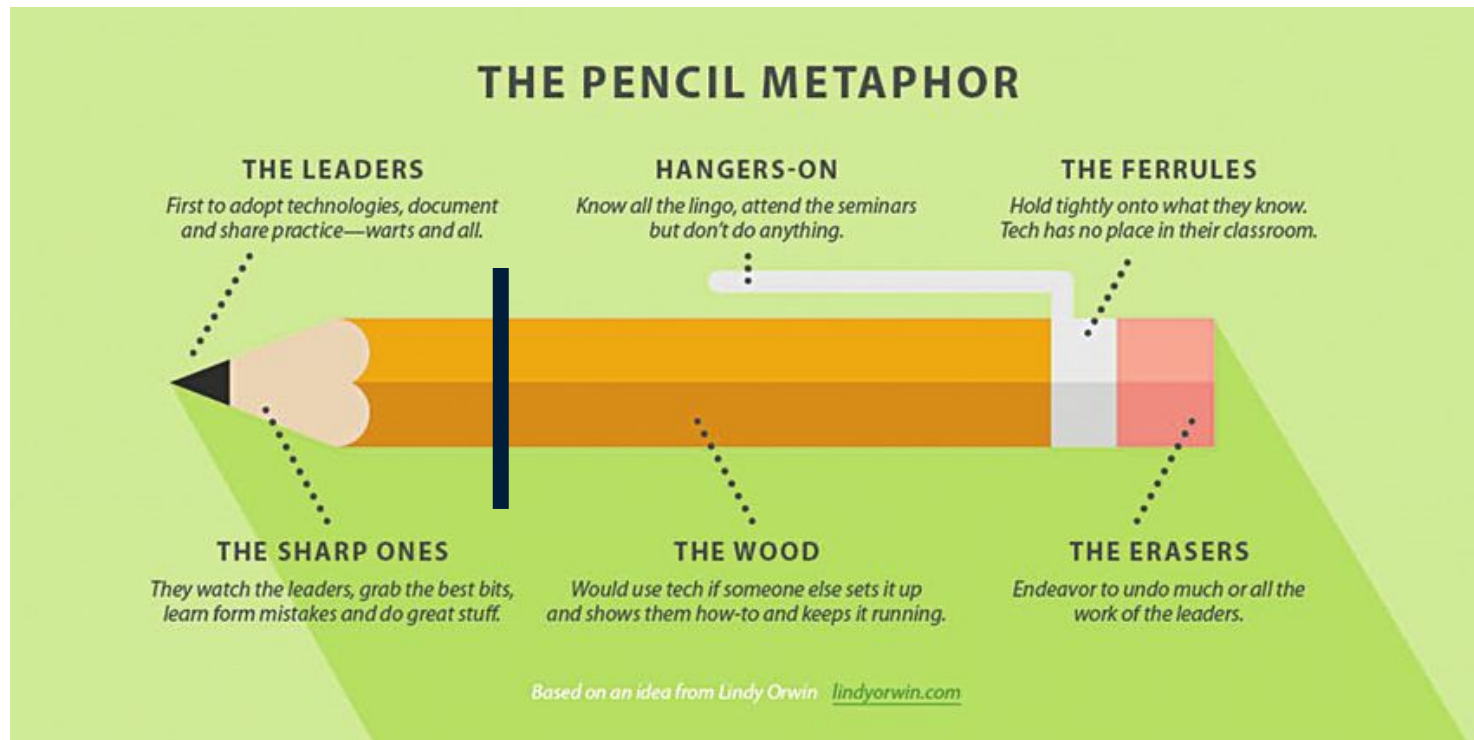
Getting an initial group of users - Tip of the pencil



Getting an initial group of users - Collar of the pencil



Getting an initial group of users - The Wood



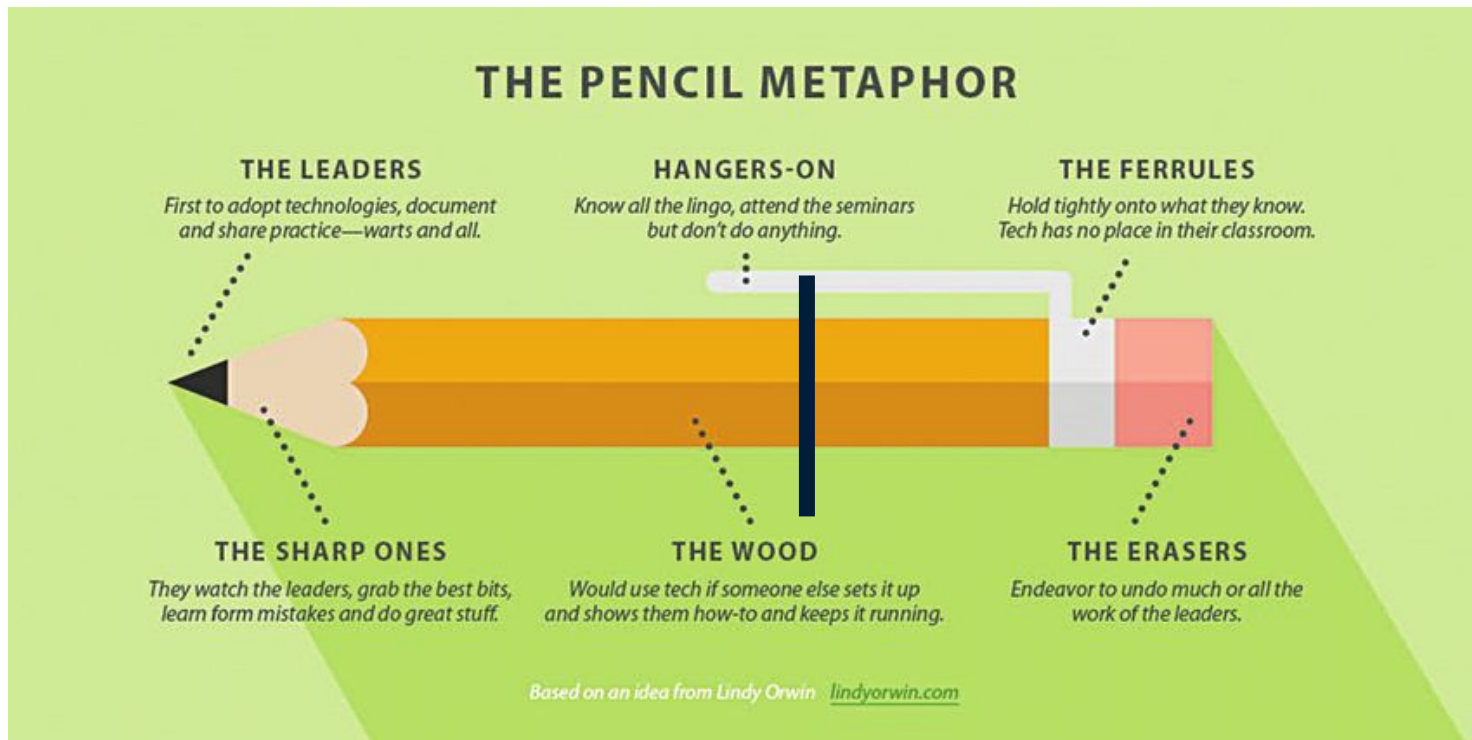
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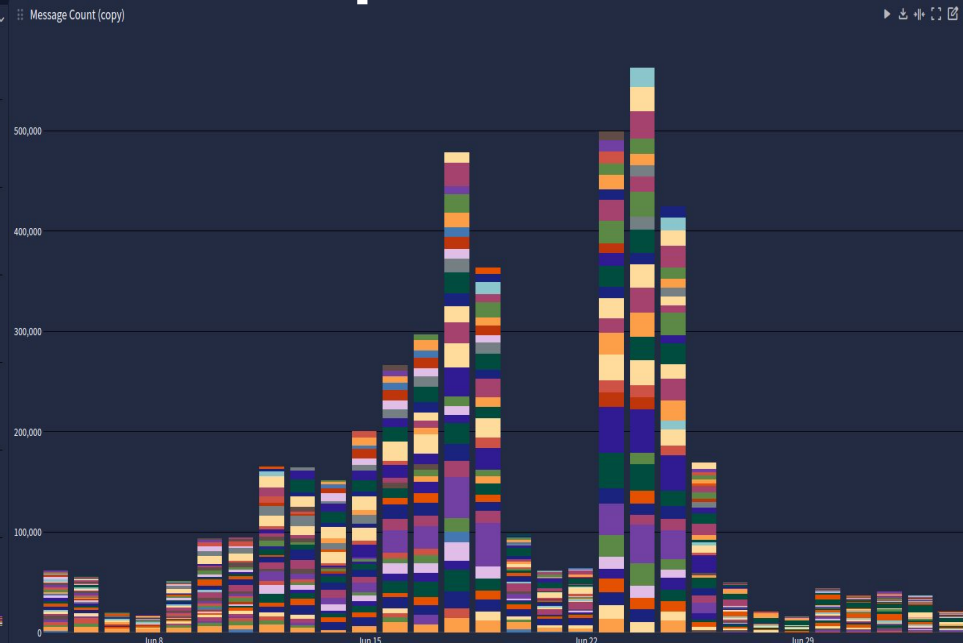
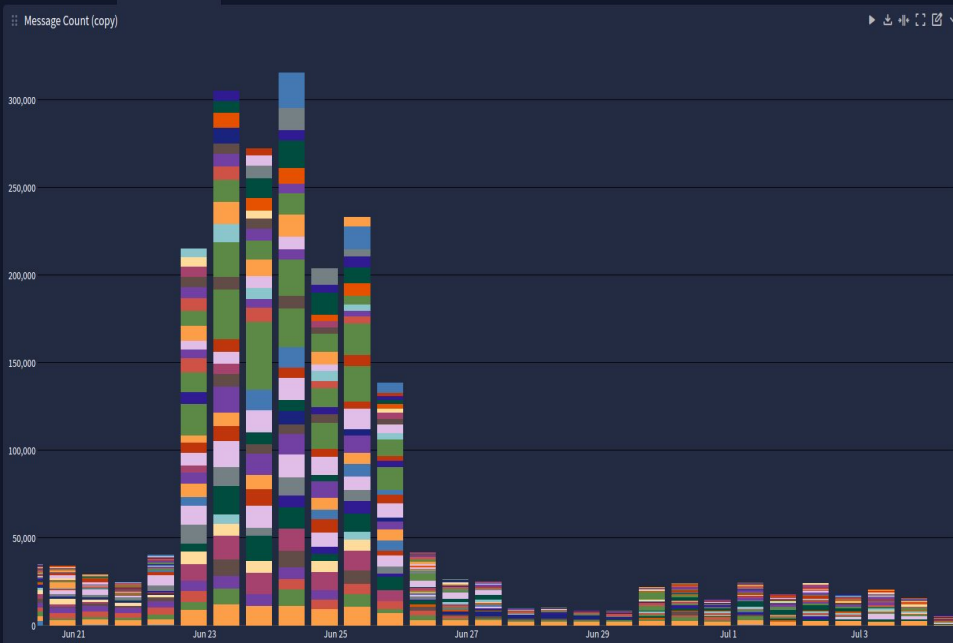
Get NI2CE, get a (cool) coaster !



And then... Stagnation



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Reason 2: BYOD



Reason 3: Onboarding and key management

Set up Secure Backup

Safeguard against losing access to encrypted messages & data by backing up encryption keys on your server.



☒ **Generate a Security Key**

We'll generate a Security Key for you to store somewhere safe, like a password manager or a safe.

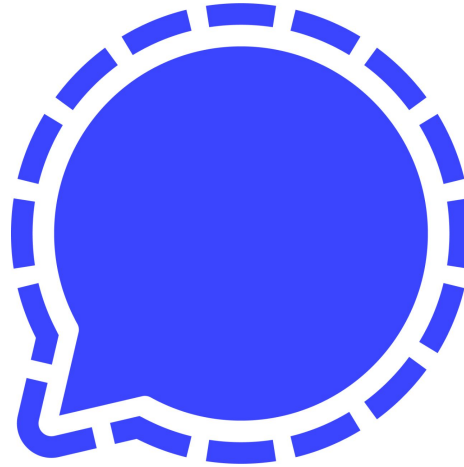
☐ **Enter a Security Phrase**

Use a secret phrase only you know, and optionally save a Security Key to use for backup.

Cancel

Continue

Reason 4: Lingua Franca in military organisations



Reason 5: I'm busy and don't have time for this



But you should use NI2CE because...

- Webhooks
- Endless opportunities thanks to API access
- Bots
- Data resiliency through federation
- Data ownership
- E2EE for all your devices
- Using Matrix because it's cool
- Liberty to host & choose a server (for personal use)
- Better privacy than Whatsapp & Signal

Nobody cares



What does work

- Local (human) agents to push the change
- Helpful and patient person to guide users... Nobody reads manuals
- Buy-in from senior management → Create FOMO
- Binary approach: everyone of the community is in
- Multiple deployments for different policies and use federation magic
- Be realistic in expectations

Your ideas?



Email: jeroen.franssen@natoinnovation.network