Security Awareness That Lasts

Russ Mumford
Visible Statement

fissea FEDERAL
CYBERSECURITY | INNOVATION | AWARENESS | TRAINING

Innovations in Cybersecurity
Awareness and Training: A 360° Perspective

QUESTION:

What are the three most important factors in security awareness?

What about compliance?

Compliance doesn't insure awareness.

Compliance is a one-size-fits-all, ***point-in-time snapshot*** that demonstrates you meet the minimum, security-related requirements of specific regulatory standards .

Security is the whole unique system of policies, processes, and technical controls that define how your organization stores, processes, consumes and distributes data so that it's effectively and verifiably protected from cyber threats.

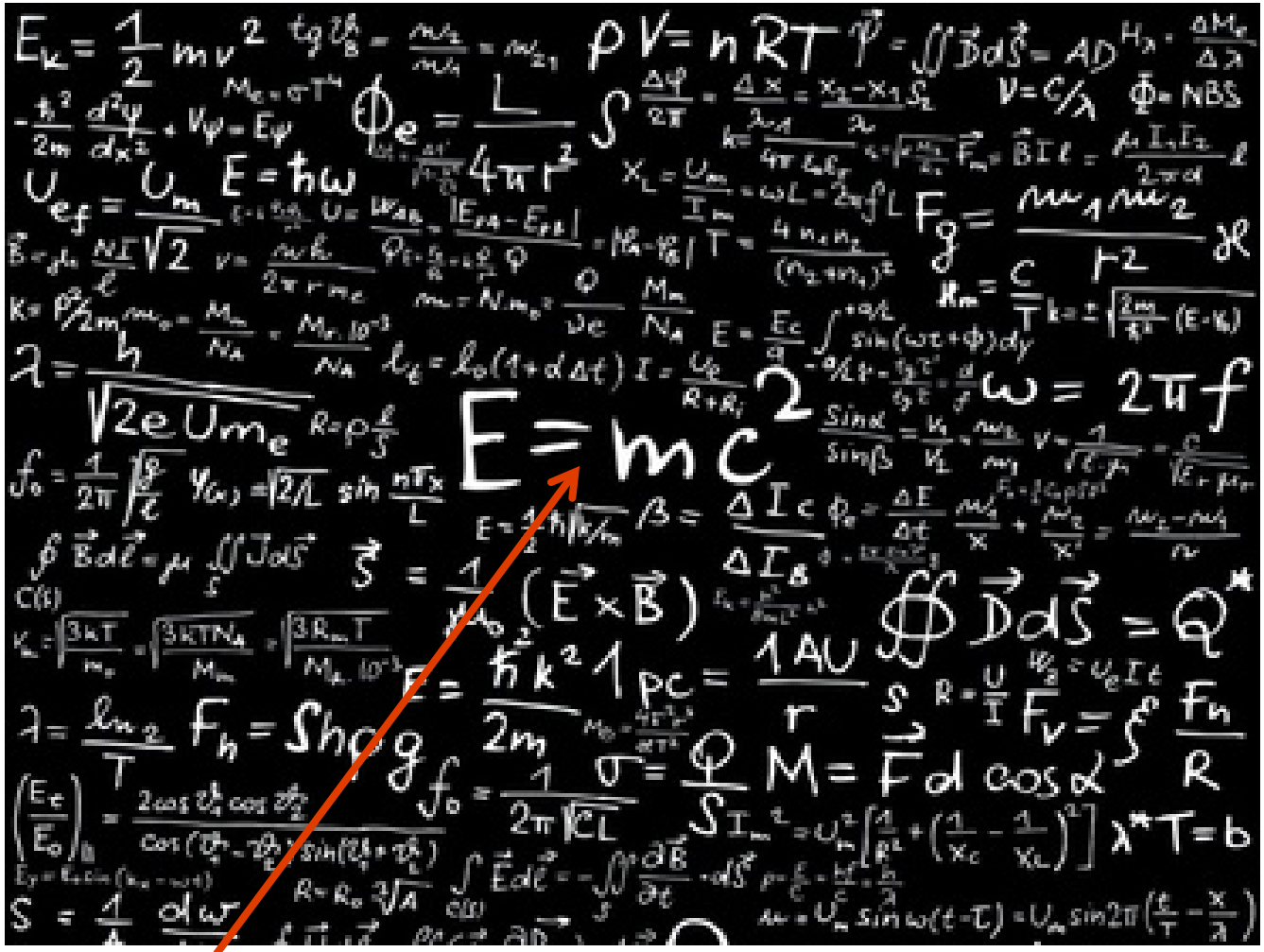
Education and Awareness...

…are different subjects.

EDUCATION…is ***information and instruction.***

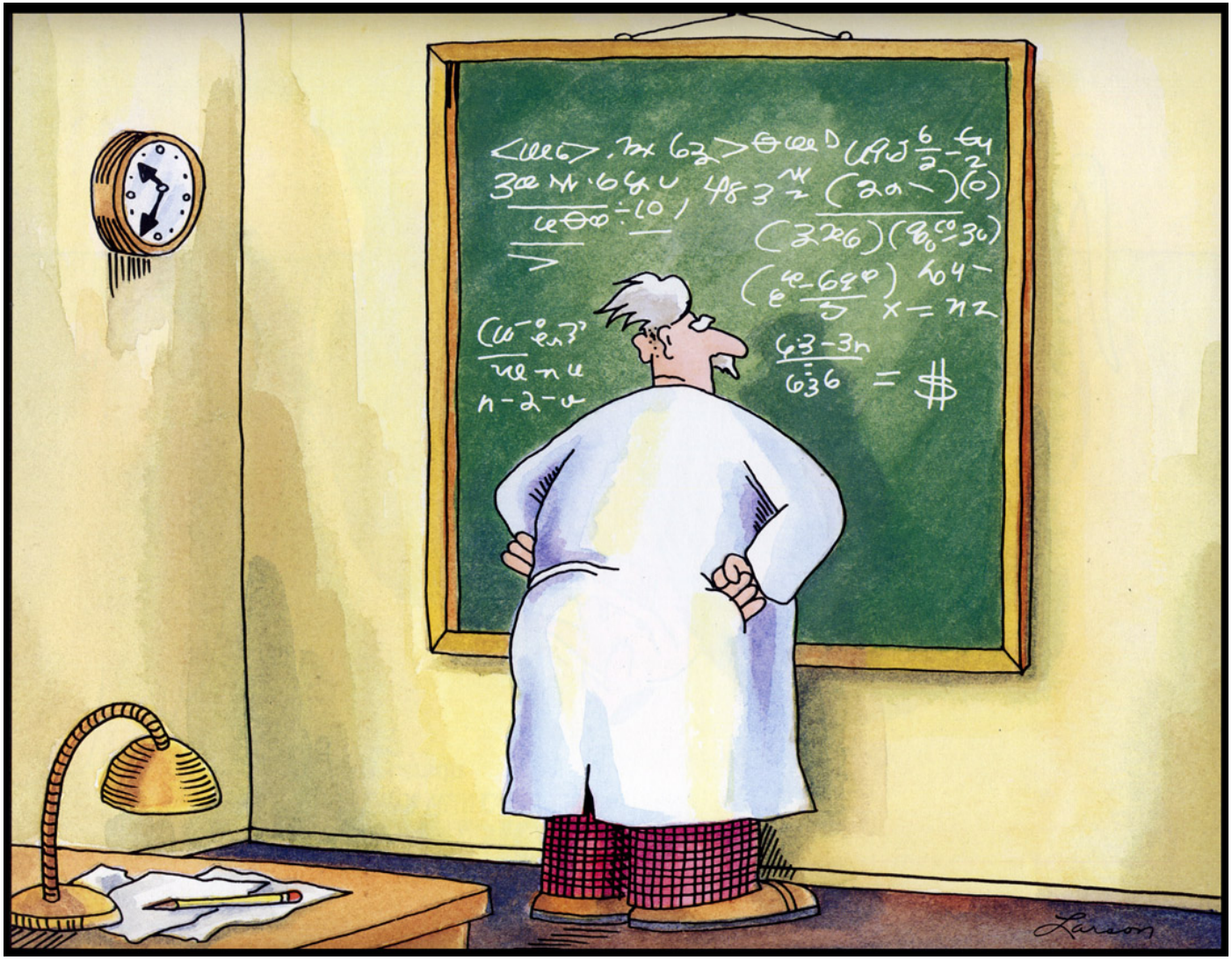
SECURITY AWARENESS…is the ***knowledge and attitude*** members of an organization possess regarding the protection of the physical, and especially informational, assets of that organization.

How do you get from this…

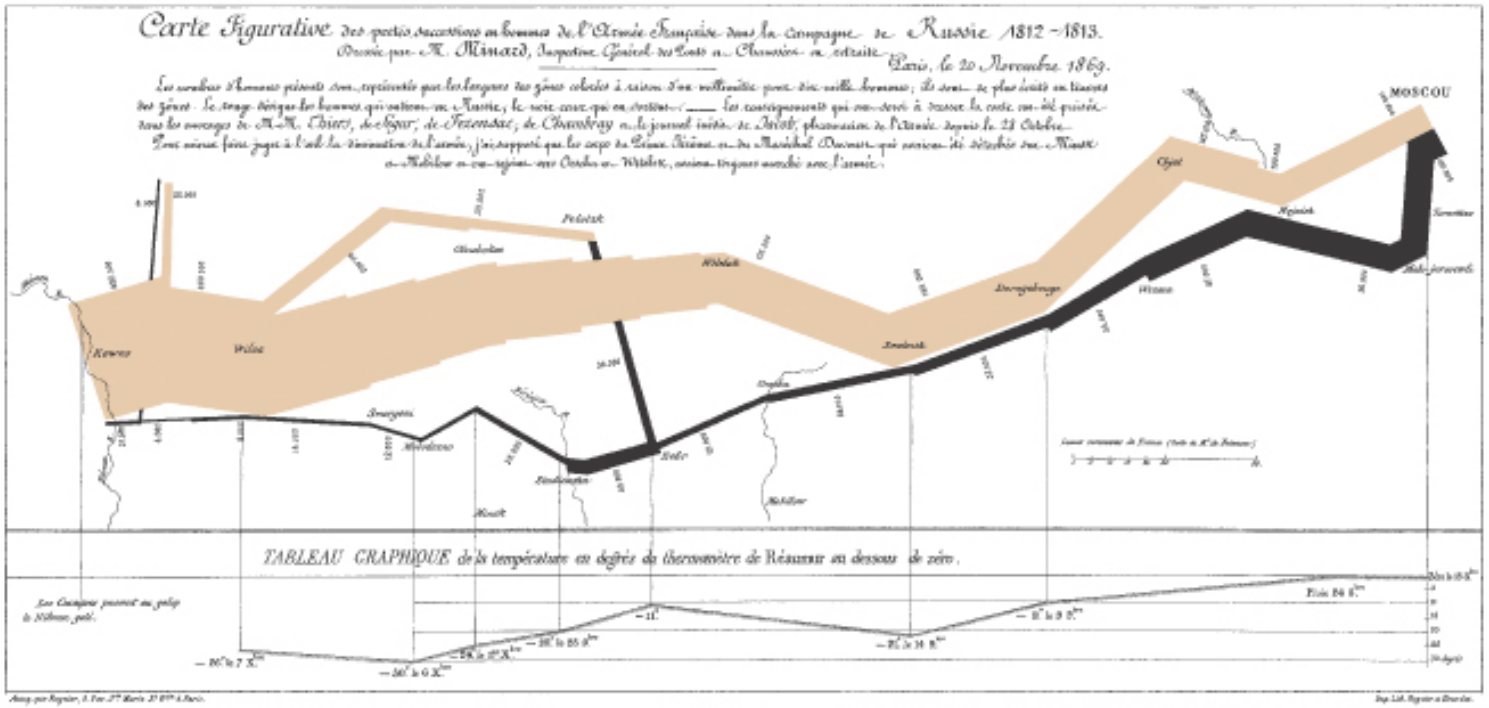


To this?

Einstein Discovers that Time is Money.



The Art of Simplification



Napoleon's March to Moscow The War of 1812

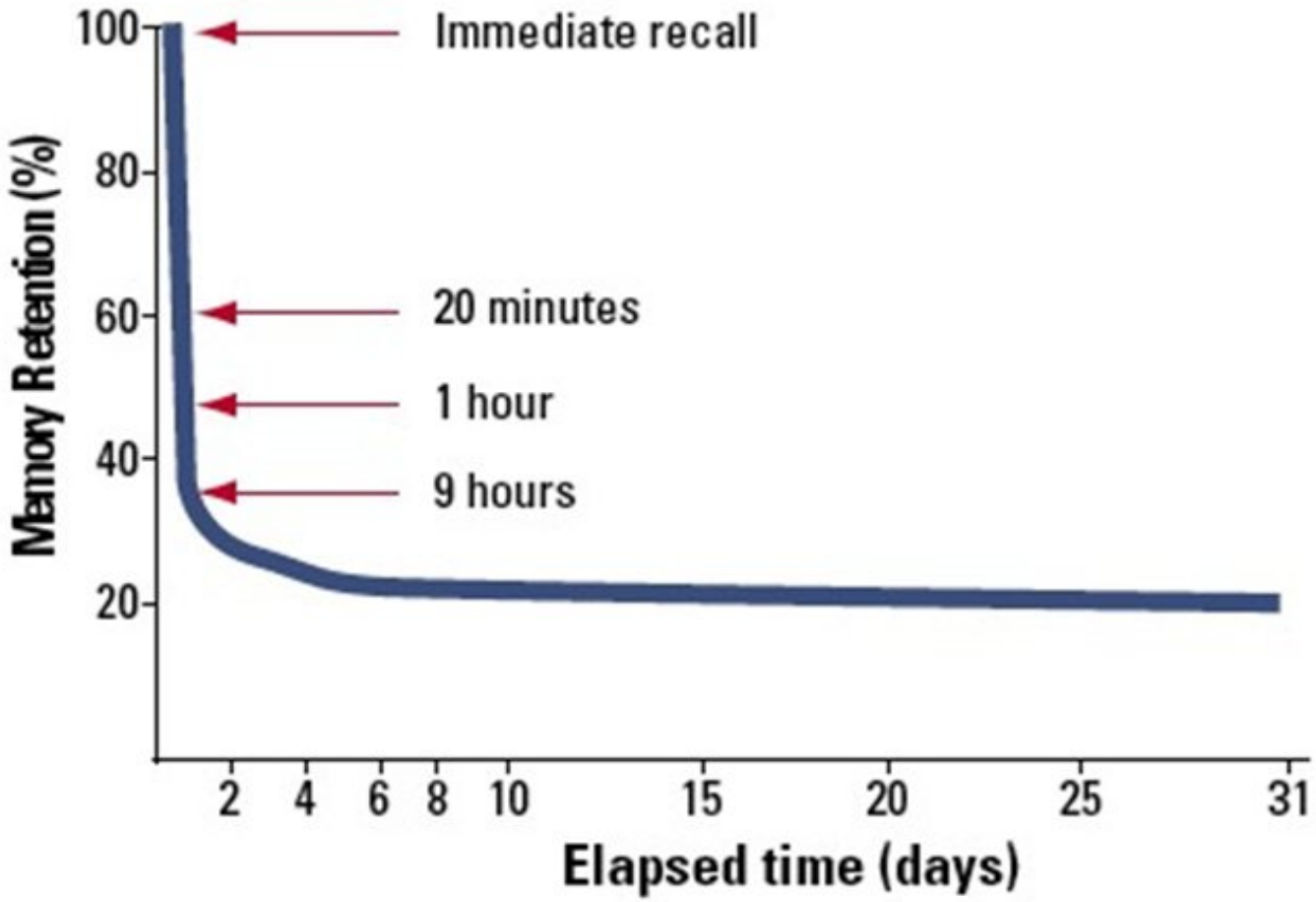
Charles Joseph Minard

This classic of Charles Joseph Minard (1781–1870), the French engineer, shows the terrible fate of Napoleon's army in Russia. Described by E. J. Marey as seeming to defy the pen of the historian by its brutal eloquence, this combination of data map and time-series, drawn in 1869, portrays the devastating losses suffered in Napoleon's Russian campaign of 1812. Beginning at the left on the Polish-Russian border near the Niemen River, the thick band shows the size of the army (422,000 men) as it invaded Russia in June 1812. The width of the band indicates the size of the army at each place on the map. In September, the army reached Moscow, which was by then sacked and deserted, with 100,000 men. The path of Napoleon's retreat from Moscow is depicted by the darker, lower band, which is linked to a temperature scale and dates at the bottom of the chart. It was a bitterly cold winter, and many froze on the march out of Russia. As the graphic shows, the crossing of the Berezina River was a disaster, and the army finally struggled back into Poland with only 10,000 men remaining. Also shown are the movements of auxiliary troops, as they sought to protect the rear and the flank of the advancing army. Minard's graphic tells a rich, coherent story with its multivariate data, far more enlightening than just a single number bouncing along over time. Six variables are plotted: the size of the army, its location on a two-dimensional surface, direction of the army's movement, and temperature on various dates during the retreat from Moscow. It may well be the best statistical graphic ever drawn.

Edward R. Tufte, *The Visual Display of Quantitative Information* Graphics Press, Box 430, Cheshire, Connecticut 06410

The Ebbinghaus Forgetting Curve

...was originally published in 1885.



The Human Component of Security

"Cybersecurity experts, including the FBI and cyber-security professionals from around the world, confirm the biggest weakness in cybersecurity is human error. In fact, IBM revealed in its latest Cyber Security Intelligence Index that ***an astonishing 95 percent of all security incidents involve human error*** – from following links to phishing scams to visiting bad websites, enabling viruses and falling victim to other advanced persistent threats."

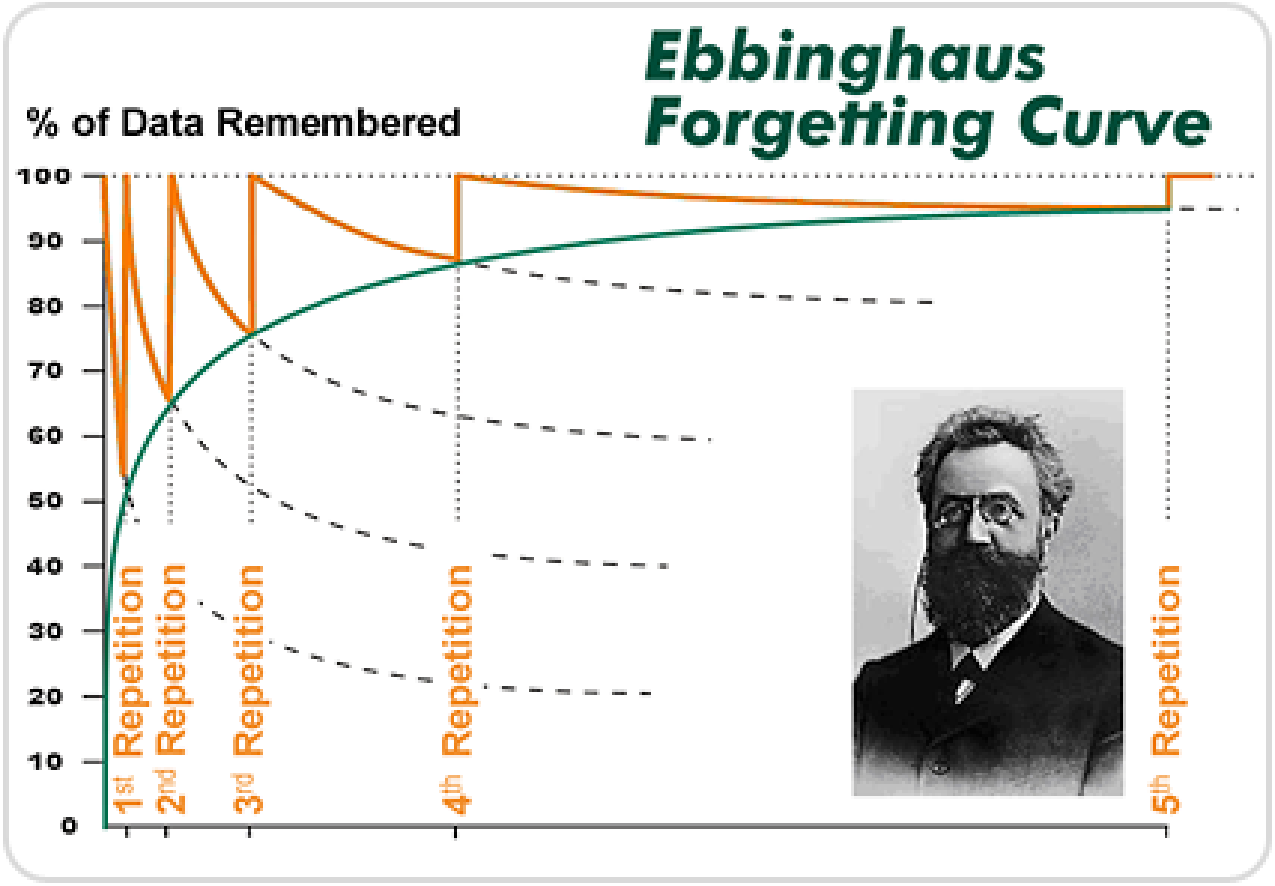
Huffington Post, 05/10/2017

The Definition of Low-Hanging Fruit

*"The **obvious or easy things that can be most readily done** or dealt with in achieving success or making progress toward an objective."*

Retention increases to 90%...

…with several spaced repetitions



Again…

What are the three most important factors in security awareness?

ANSWER:

REPETITION

REPETITION

REPETITION

Ways to Insure Repetition

- Computer Generated Reminders
- E-mail
- Text Messages
- Logon Messages
- Web Site
- Newsletters
- Training Exercises
- Newsletters
- Posters

Visible Statement

Security Remembered. Awareness Delivered.

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