Tribute to Watts Humphrey

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Tribute to Watts Humphrey
1927-2010

The Legacy of Watts Humphrey

Passion

Energy

Commitment

Discipline

Global focus

The Early Years

Born on the Fourth of July, 1927, in Battle Creek, Michigan

Son of an MIT-trained engineer, also named Watts

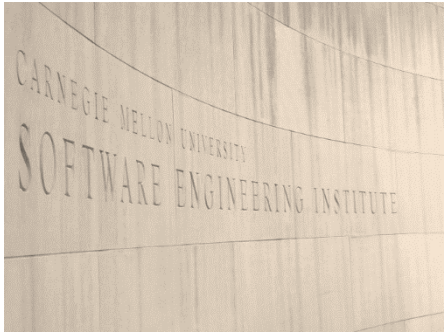
Family moved to Litchfield, Connecticut after Watts failed first grade, so that he could attend a school that provided more individual attention. (Watts would be eventually diagnosed with dyslexia.)

Graduated high school at the top of his class (valedictorian) in 1944

Deferred college to serve in the U.S. Navy during World War II

After the Navy, Watts earned a Bachelor's degree in physics at the University of Chicago, then a Masters in physics at Illinois Institute of Technology, and then an MBA from the University of Chicago.

Moving from Hardware to Software



Watts began working for IBM in 1959, initially in hardware as a computer designer and architect.

Later at IBM, Watts transitioned into software and became the director of programming and vice-president of technical development, where he supervised 4,000 software professionals across 15 laboratories and seven countries.

Watts joined the SEI in 1986.

Larry Druffel, SEI director and CEO from 1986 to 1996, said that when Watts arrived at the SEI, he came with a vision based on his work at IBM:

> Software could be managed by process

At the SEI: CMM, PSP, TSP

Led a team that identified characteristics of best practices in software engineering

- Groundwork for the Software Capability Maturity Model (CMM) and, eventually, CMMI.

Led development of the Personal Software Process (PSP) and the Team Software Process (TSP)

Was named the first Fellow of the SEI

Was instrumental, with Steve Masters, in forming the Software Engineering Process Group (SEPG) conference

An author and editor: Watts authored 12 books and hundreds of technical reports, journals, and columns. He was a member of the editorial board of the *Journal of Empirical Software Engineering* and the *Journal of Software Process Improvement and Practice*.

Watts' Many Accolades

- The National Medal of Technology, the country's highest honor in this field
- Association of Computer Machinery Fellow
- IEEE Fellow
- Honorary doctorate of software engineering from Embry Riddle Aeronautical University
- Embry Riddle Industry Advisory Board member

Continuing Watts' Legacy…IEEE CS / SEI Watts S. Humphrey Software Process Achievement Award Established

- Created in 1994 and co-sponsored by IEEE Computer Society and the Software Engineering Institute to recognize out-standing achievements in improving an organization's ability to create and evolve high-quality software-dependent systems.

- Nominations are open for the 2023 award with a deadline of September 1, 2022.
- For more information, see https://resources.sei.cmu.edu/news-events/events/watts

Dr. Lee Osterweil

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Matthew Butkovic

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How Capability Maturity Models Transformed Cybersecurity Performance Measurement

Matthew Butkovic

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A Matter of Innovation

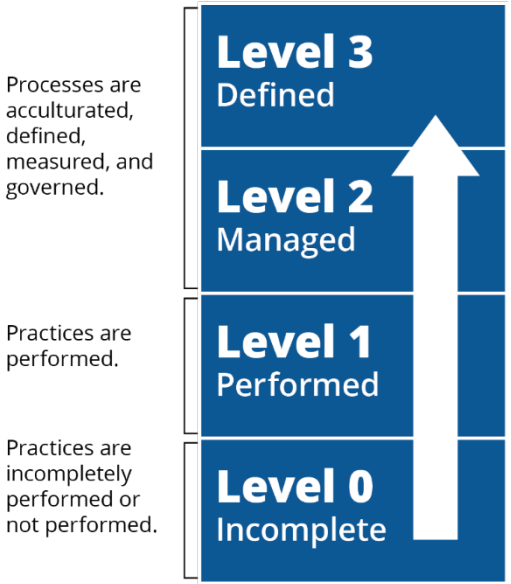
“Innovation is the process of turning ideas into manufacturable and marketable form”

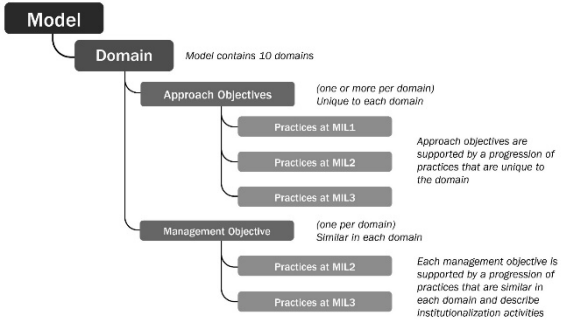
-Watts Humphrey

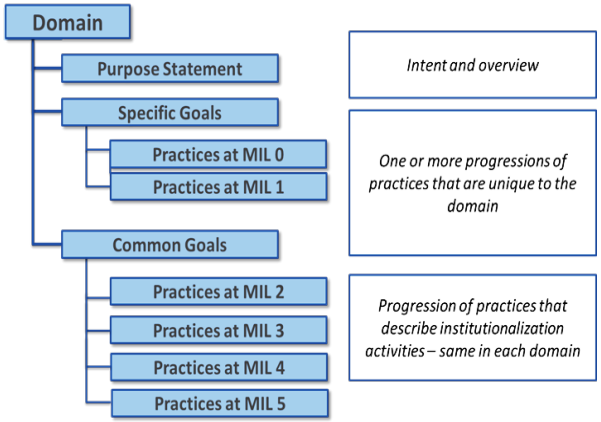
Measuring the Institutionalization of Cybersecurity Process

institutionalize *verb*
to make something become part of a particular society, system, or organization

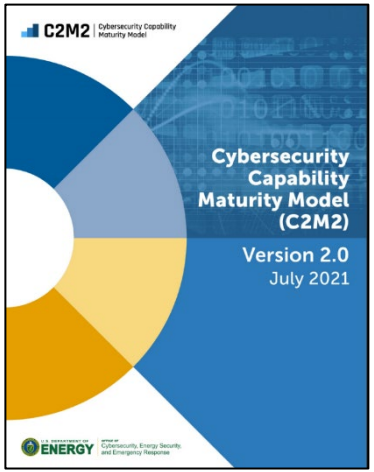
What was once an informal event has now become institutionalized.



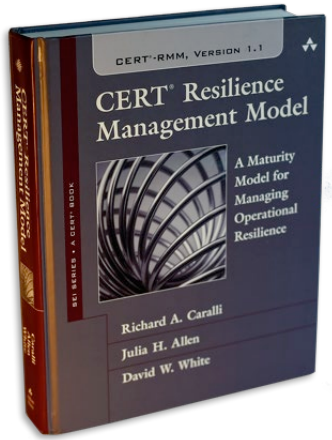




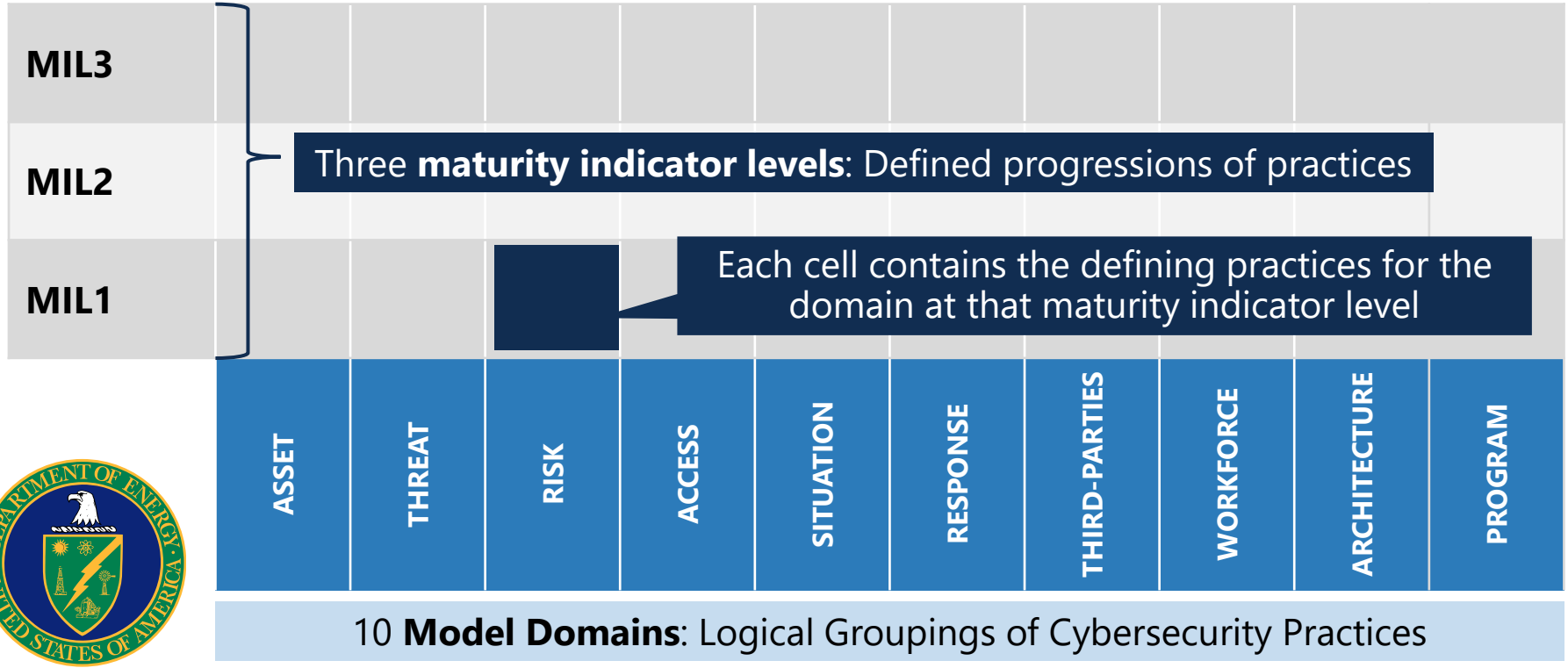
Transcending Cybersecurity Checklists



CYBER RESILIENCE ANALYSIS

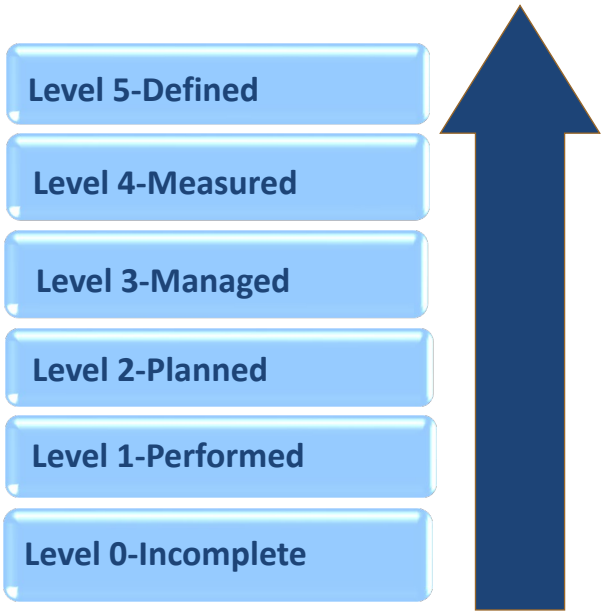


Cybersecurity Capability Maturity Model



Cyber Resilience Review

Maturity indictor levels (MIL) are used in the CRR to measure process institutionalization



CRR Domains	
AM	Asset Management
CCM	Configuration and Change Management
RM	Risk Management
CTRL	Controls Management
VM	Vulnerability Management
IM	Incident Management
SCM	Service Continuity Management
EXD	External Dependencies Management
TA	Training and Awareness
SA	Situational Awareness

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