

# Sustainable IT is Secure IT

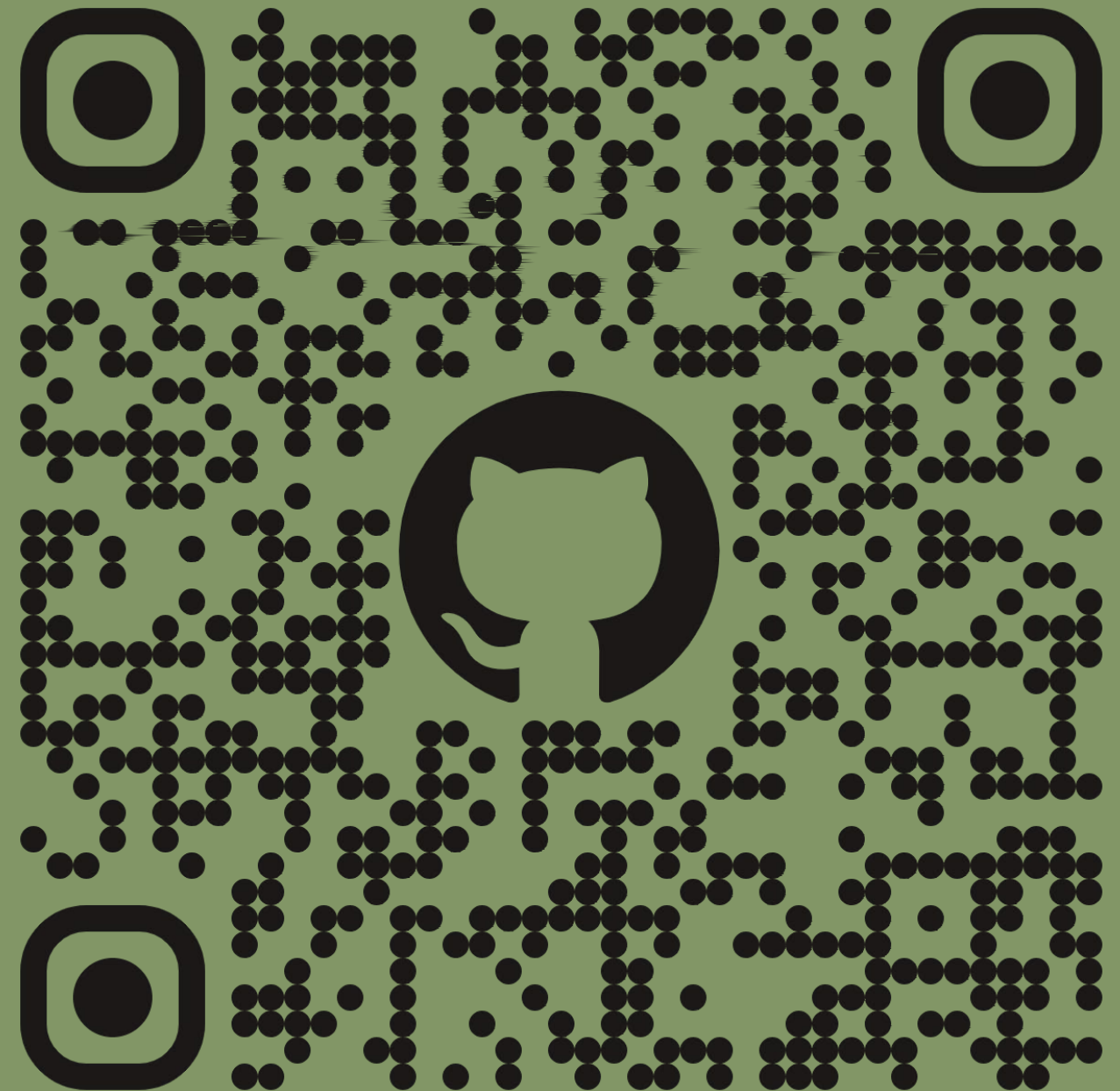
## Building a Resilient and Responsible Digital Future

SEI Secure Software By  
Design 5 August 2024



# Link to Slides

<https://tinyurl.com/ydv2z4vr>



# Who am I?

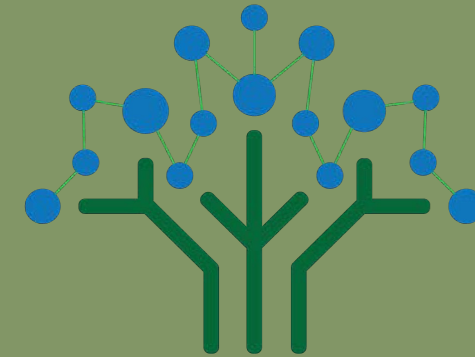
**Matt "Kelly"  
Williams**



- Over 35 years IT experien
- International Speaker & Thought Leader in Sustainability, Cloud, and DevOps
- Creator of the Sustainable IT Manifesto
- Green Computing Foundation Advisory Board Member
- Resides in Colorado



# Organizations



Green Computing  
Foundation

Green Computing Foundation

<http://GreenComputingFoundation.org>

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Sustainable IT Manifesto

<http://SustainableITManifesto.org>

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# Four Pillars



# The Connection Between Sustainability and Security



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*sustainable practices often  
lead to more resilient and  
secure systems*

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## ***Sustainability:***

*Meeting current needs without compromising future generations' ability to meet theirs.*

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***Security:***  
*Focus on protecting systems,  
networks, and data from threats.*

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# Sustainable IT Manifesto

We are uncovering better ways of developing software and hardware by doing it and helping others do it. Through this work, we have come to value...



# Energy Efficiency over Raw Performance



Improved Reliability and  
Reduced Vulnerability

- Example: Google's  
energy- efficient data  
centers



# Resource Efficiency over Resource Abundance



Reduced Attack  
Surfaces and Resource-  
based Attack Impacts

- Example: Efficient  
coding practices at  
Intel



# Long-term Sustainability over Short-term Gains



Enhanced System Resilience  
and Reduced Upgrade Needs

- Example: Microsoft's carbon negative goal



# Holistic Impact Awareness over Siloed Focus



Comprehensive Risk  
Management

- Example: Cisco's sustainable supply chain initiatives





# Return to Environment over Return on Investment



Stable, Trustworthy  
Environment

- Example: Apple's recycling and renewable energy programs



# Inclusive Collaboration over Isolated Decision Making



Robust Security Solutions  
Through Collaboration

- Example: Facebook's collaborative data center designs



# Adaptive Planning over Fixed Roadmaps



Quick Responses to  
Emerging Threats

- Example: Adaptive security planning at Amazon (AWS)



# Transparent Reporting over Selective Disclosure



- Trust-building with Stakeholders
- Example: Transparent environmental reporting by Dell



# Continuous Environmental Learning over Static Knowledge



Maintaining Robust Defenses  
with Evolving Knowledge

- Example: Continuous learning initiatives at HP





# Community and Ecosystem Wellbeing over Individual Benefits



- Preventing disruptions that affect the larger community
- Example:  
Community- focused sustainability projects by Lenovo



# Eco-friendly Materials over Cheap Alternatives



Longer-lasting Hardware  
and Reduced Failures

- Example: Eco-friendly materials used by Samsung



# Device Longevity over Planned Obsolescence



- Reducing frequency of replacements and new vulnerabilities
- Example: Long-lasting device design by IBM



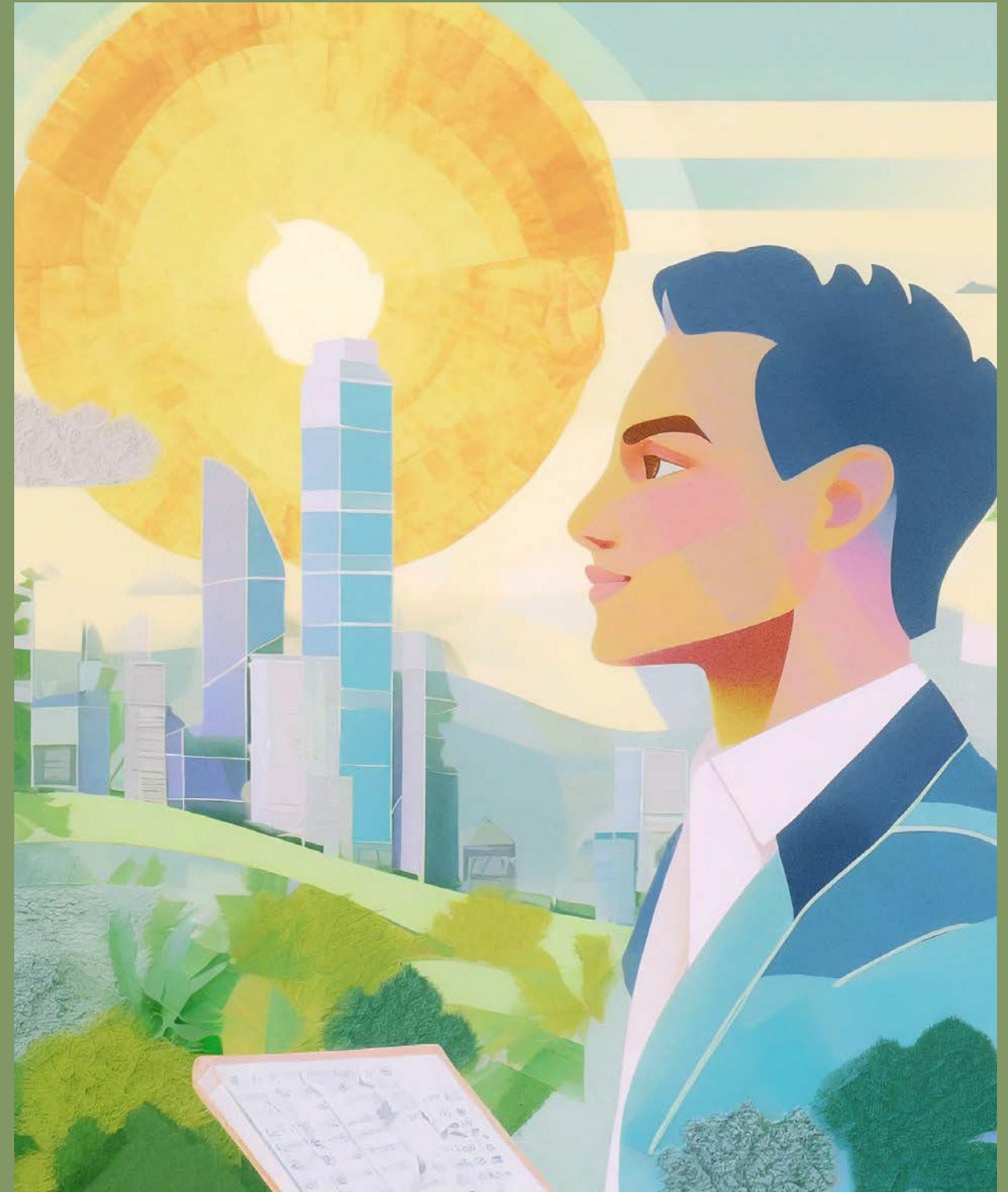
# Practical Steps for Integrating Sustainability and Security



# Strategic Goals

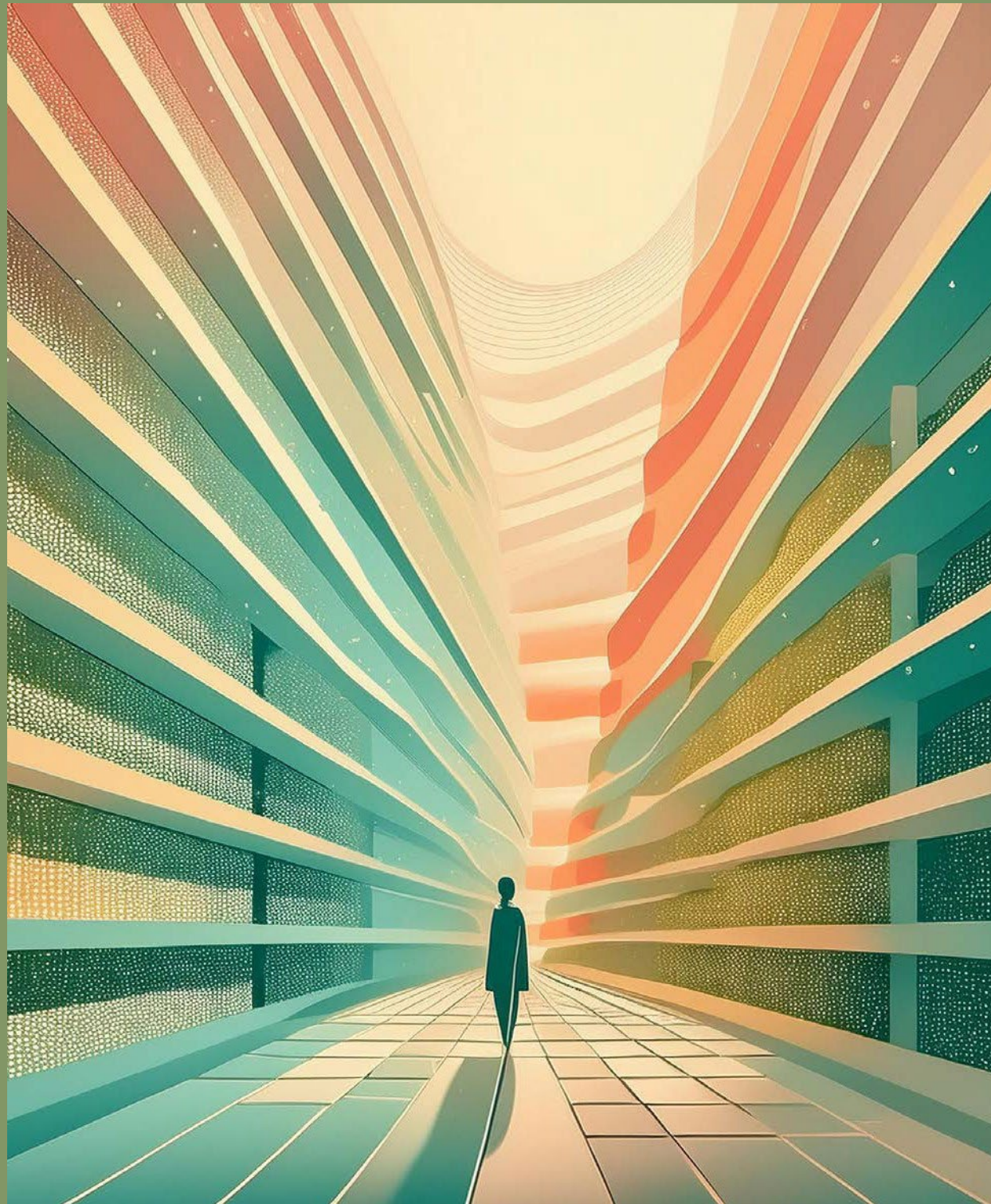
- Reduce Energy Consumption
- Minimize Electronic Waste
- Enhance System Resilience
- Promote Ethical Sourcing
- Increase Transparency
- Foster

Making Software Greener,  
Ltd.  
Continuous  
Learning



<http://MakingSoftwareGreener.com>





# Opportunities

- Innovation and Competitive Advantage
- Risk Mitigation
- Operational Efficiency
- Stakeholder Engagement



# Steps

1. Conduct a Sustainability Audit: Assess current energy use, waste production, and sourcing practices.
2. Set Clear Goals: Define specific, measurable sustainability and security goals.



# Steps

1. Adopt Energy-Efficient Technologies:  
Upgrade to energy-efficient hardware and software.
2. Implement E-Waste Programs:  
Establish programs for the responsible disposal and recycling of electronic devices.



# Steps

1. Use Sustainable Materials: Choose eco-friendly and recyclable materials for all hardware components.
2. Enhance Supply Chain Transparency: Work with suppliers to ensure ethical sourcing and traceability.



# Steps

1. Regular Training and Education: Provide continuous training on the latest sustainability and security practices.
2. Report Progress: Maintain transparent reporting on progress towards sustainability and security goals.





# Overcoming Common Challenges

- Initial Costs
  - Resistance to Change
  - Lack of Awareness, Consciousness, etc.
  - Supply Chain Complexity
  - Measuring Impact
- Making Software Greener, Ltd.



# Actionable Tips

- Be Pragmatic
- Start small
- Measure everything
- Engage stakeholders across departments
- "As Above, so Below"
- Tailor the Messaging
- Learn to herd cats





# Conclusion

sustainable practices  
often lead to more  
resilient and secure  
systems





# Questions?

