# SME-to-Lead,
# Tips for new technical managers

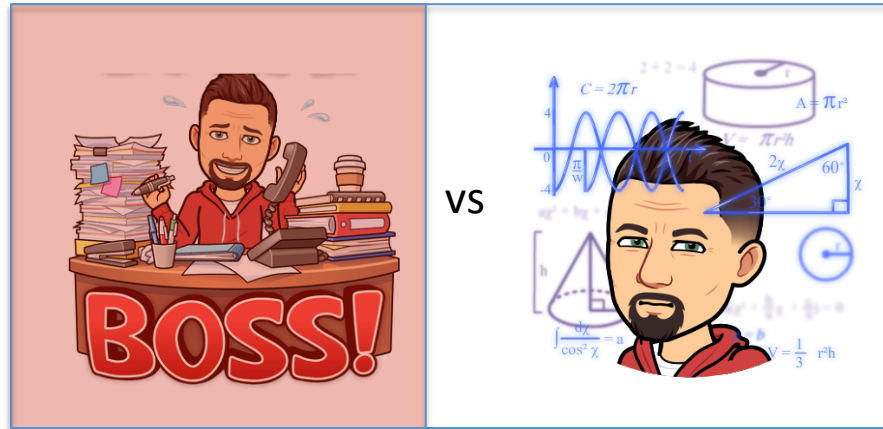2018 Rochester Security Summit

# Intro

Dennis M. Allen

Technical Manager, Cyber Education and Training

I guide an outstanding group of cybersecurity professionals at the Software Engineering Institute, that develop and implement cutting edge training programs for the federal government and DoD.

# 3 Basic Challenges

vs

# Strengths, Weaknesses, Opportunities, and Threats

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|---|---|
| What do you do well? | What could you do better? | New Business/Funding? | Loss of key customers? |
| What are your unique resources/skills? | What resources/skills are you missing? | New Products? | Crowded Marketplace? |
| What do *others see* as your strengths? | What do *others see* as your weaknesses? | How can you use those strengths? | Exposure from weaknesses? |
| **Internal** | | **External** | |
| **You -> Team** | | **Team -> Organization/Business** | |

Other considerations:
- Quality of work
- Competition
- Previous success/failure
- Reputation/Brand
- Personal/Team/Organizational Commitment
- Partnerships/Alliances

What do you think?

# Know Your *__Personal__* Strengths & Weaknesses

- Example Strengths
  - I am pretty good with email communications
  - I always prioritize the mission first
  - I really care about my people
  - I have a strong technical background and learn quickly

- Example Weaknesses
  - I can be terse/blunt
  - I still struggle with procrastination and time management
  - I am constantly challenged to improve my project management skills (e.g., my way versus emerging best practices versus organizational directives)

Are your weaknesses opportunities?

# Know Your _**Team's**_ Strengths & Weaknesses

- Example Strengths
  - Organizational Culture
    - We are very mission focused
    - We genuinely care about each other
  - We are very technically proficient

- Example Weaknesses
  - We need to improve project/task tracking
  - We do not consistently develop to the same standard (including documentation)
  - We have a small staff, with a shallow skills base in many areas

Are these the same?

Did you ask them?

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‹ ● ● ● ● ● ● ● ›

Presentation Skills Workbook

**MindTools**
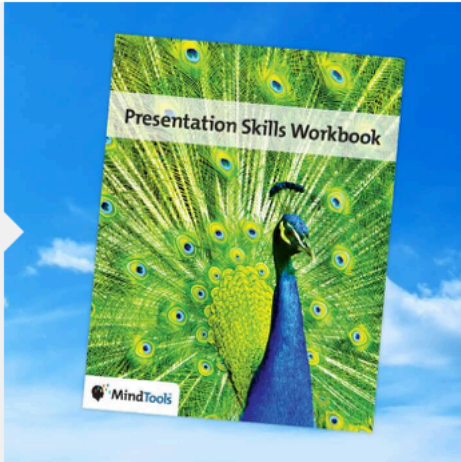
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Email

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## Explore the Toolkit

| 60 | 303 | 142 | 47 | 56 | 65 | 62 | 74 | 149 | 30 | 54 | 206 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Leadership Skills | Team Management | Strategy Tools | Problem Solving | Decision Making | Project Management | Time Management | Stress Management | Communication Skills | Creativity Tools | Learning Skills | Career Skills |

**You are here:** Home / Communication Skills / Start Here / How Good Are Your Communication Skills?

## Toolkit

> **Leadership Skills** (60)
> **Team Management** (303)
> **Strategy Tools** (142)
> **Problem Solving** (47)
> **Decision Making** (56)
> **Project Management** (65)
> **Time Management** (62)
> **Stress Management** (74)
> **Communication Skills** (149)
> **Creativity Tools** (30)
> **Learning Skills** (54)
> **Career Skills** (206)

**My Learning Plan** ⌄

## Communication Skills

**Start Here** ^

Communication Skills - Start Here ⊕

5.2K

By the Mind Tools Content Team

(1422) ★★★★½

# How Good Are Your Communication Skills?

**Speaking, Listening, Writing, and Reading Effectively**

Communication is one of the most important skills that you need to succeed in the workplace.

If you want to be an expert communicator, you need to be effective at all points in the communication process – from "sender" through to "receiver" – and you must be comfortable with the different channels of communication – face to face, online, written, and so on. This is because poor communicators often struggle to develop their careers beyond a certain point.

© iStockphoto
skynesher

**Are you a clear communicator or a confusing one?**

So, how can you find out how good your communication skills really are? Take this short quiz to find out
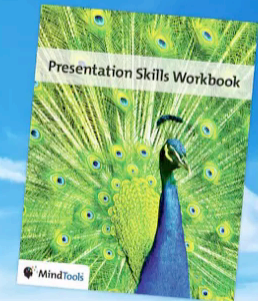
# Pick an Assessment

### Communication

Understanding the value of information sharing and viewing information as a resource: conveying information, thoughts and ideas through written and verbal media in a manner that engages others, encourages understanding, and reflects departmental and/or institutional goals; actively listening to confirm understanding of a message; assessing the effectiveness of communication efforts and strategies.

TAKE THIS ASSESSMENT!

### Creativity and Innovation

Generating new and unique ideas or solutions; making connections among previously unrelated ideas or concepts; demonstrating appropriate risk-taking; experimenting with new and different approaches to problem solving; applying original thinking in job responsibilities to improve process, systems, and departmental efficiency.

TAKE THIS ASSESSMENT!

### Decision Making

Evaluating situations and opportunities to determine the number, nature and appropriateness of responses that exist; developing and employing strategies to identify objectives, collect data, and select the most appropriate option to achieve objectives in a reasonable timeframe; committing to decisions and taking action to implement them; assessing the effectiveness of chosen options at meeting articulated objective(s).

TAKE THIS ASSESSMENT!

### Intercultural Awareness

Interacting with people with different cultural backgrounds; understanding of global issues; demonstrating appreciation when working with individuals from diverse (cultural) backgrounds; using effective oral and written communication skills; empathizing with and understanding different cultural perspectives; exhibiting adaptability when interacting in multilingual, multinational and multicultural situations.

TAKE THIS ASSESSMENT!

### Managing Conflict

Exploring tools and strategies to effectively address and resolve workplace conflict; identifying sources of conflict that impact an individual's or group's effectiveness or cohesion; evaluating conflict situations to find the underlying factors which contribute to the conflict; determining possible solutions and developing appropriate actions to address conflict.

TAKE THIS ASSESSMENT!

### Priority Management

Evaluating organizational goals to determine priorities and aligning work efforts to address identified priorities; determining the importance of projects and tasks relative to one another and to organizational goals; developing strategies, timelines and action plans to accomplish projects and tasks; determining and directing work efforts toward high-priority projects.

TAKE THIS ASSESSMENT!

### Problem Solving

Identifying and determining the cause(s) of a problem; looking for opportunities within problem situations; understanding and evaluating all facets of a problem situation to understand its context; developing multiple strategies to achieve acceptable outcomes; recommending or implementing an acceptable solution that incorporates facts and probable outcomes; assessing the impact of implemented solutions.

TAKE THIS ASSESSMENT!

### Strategic Visioning

Demonstrating a strategic understanding of how an organization works; integrating organizational vision and mission into long-range goals and initiatives; leveraging formal and informal relationships across boundaries and departments within the institution; anticipating opportunities for, and consequences of, change; exhibiting a high tolerance for risk and uncertainty; adapting easily to changes in context and the organizational landscape.

### Utilizing Technology

Knowing, selecting, and using appropriate technology resources and software applications to meet operational needs and aid in the completion of work tasks; integrating and adapting to new technology and software; identifying and implementing technology resources and software applications that meet the needs and functions of individuals, departments, and organizations; optimizing business processes to address organizational goals.

TAKE THIS ASSESSMENT!

### Working with Others

Sharing knowledge, ideas and strengths to create collaborative and productive relationships; engaging, welcoming and adapting to the strengths and differences of individuals within a group; soliciting, respecting and incorporating the best of group members' ideas, knowledge and opinions.

TAKE THIS ASSESSMENT!

# Decision Making Assessment

8. I can gather the data I need to make decisions about familiar tasks and processes and can identify the potential responses to the decision.

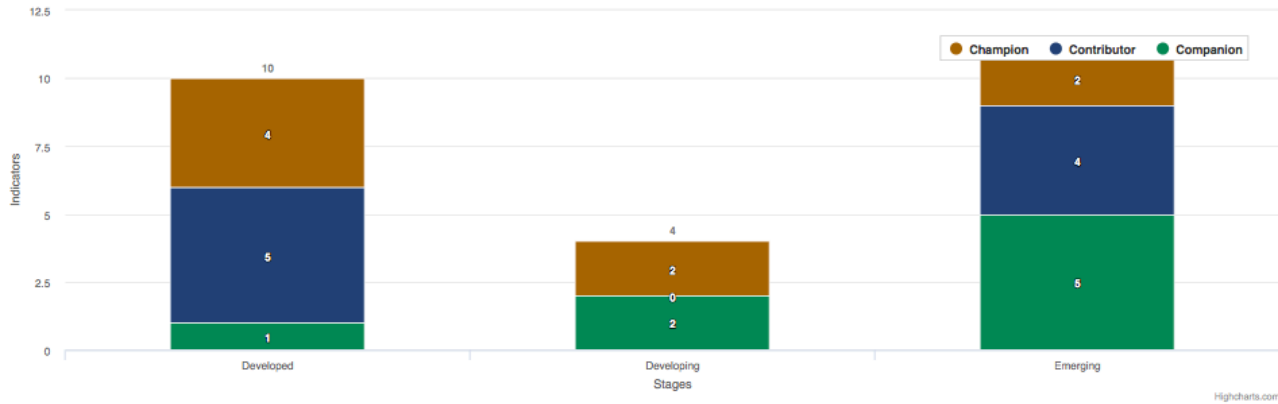○ Always          ○ Often          ○ Sometimes          ○ Rarely          ○ Never          ○ Does Not Apply

**‹ PREV**     **NEXT ›**

# Assessment Report for Decision Making

# Our Levels

## Champion

As a **Champion**, you are someone who has a practiced understanding of this competency, but you need to integrate the strategies and skills you have developed and consistently apply these skills.

## Contributor

As a **Contributor**, you are someone who has developed a solid foundation of skills within this competency, but you still need to strengthen these skills and their application.

## Companion

As a **Companion**, you are beginning your journey to develop this competency through learning new skills and approaches.

# Our Paradigm

## Build Understanding

Reading is a great way to expand your knowledge and expose you to new ways of thinking. Use these suggested readings to further develop your understanding.

## Get Connected

Online learning resources provide an opportunity for you to engage in targeted professional development. These resources are available when you are and allow you to choose resources relevant to your learning goals. Use these resources to engage in online learning opportunities.

## Do Something

Practicing a new skill is essential to applying it to your work. Practicing provides an opportunity to experiment and try different ways to apply the skill. Use these strategies to incorporate intentional practice into your learning strategy.

## Engage With Others

Our colleagues are an invaluable component of the learning experience. Engaging with others provides the opportunity to exchange thoughts, offer support, share best practices and learn from one another. Apply these strategies to connect with your colleagues around the topic and learn from one another.

## Reflect on It

Reflection is an integral part of the learning process. Engaging in reflection dedicates thoughtful time to consider what was learned, gain insights from experiences, and identify successes and opportunities for improvements. Use these prompts to begin your reflection and incorporate it as part of your learning process.

## Learn More

Attending workshops offered by Professional Development Services provides opportunities to meet colleagues, explore techniques and strategies and practice applying new approaches to your work. Consider attending one of these workshops as part of your professional development.

# Developing

You demonstrate these abilities and behaviors on an inconsistent basis. Your goal is to build consistency and continuity.

- Build diverse, effective teams to make appropriate and effective decisions in complex situations. (Champion)
- Assess personal and group decision-making processes and encourage use of best practices. (Champion)
- Determine if a formal decision-making process is appropriate for a given situation. (Companion)
- Follow a structured process to determine possible solutions for a familiar decision. (Companion)

# Emerging

These abilities and behaviors are yet to be developed. Your goal is to familiarize and practice.

- Evaluate options and make appropriate decisions in complex, ambiguous and unfamiliar situations. (Champion)
- Proactively develop responses to mitigate anticipated consequences and risks of a decision. (Champion)
- Anticipate possible outcomes and identify potential problems with a particular decision. (Contributor)
- Identify decision-making variables and mitigate anticipated challenges with proposed solutions. (Contributor)
- Test assumptions prior to finalizing a decision. (Contributor)
- Organize necessary data for a decision, whether familiar or complex. (Contributor)

- Determine if chosen option or solution met desired objective(s). (Companion)

## Build Understanding

*A Practical Guide to Critical Thinking: Deciding What to Do and Believe, Second Edition* by David A. Hunter

*Decision Trees: Choosing by Projecting "Expected Outcomes"* by the Mindtools Editorial Team

## Get Connected

*Implementing and Sustaining Process Improvement*

*Problem Solving and Decision Making: Achieving Desired Results*

## Do Something

Assess if your decision-making process successfully helped you meet identified outcomes for a decision. List metrics you will use for assessing your process.

Write a timeline for enacting your decision. Use this timeline to measure the success and impact of your choice.

## Engage With Others

Use feedback to inform future decisions. Ask colleagues for feedback regarding the outcome of a decision you recently made.

# Identify Team Measures of Success

- Examples
  - No news is good news in Cyber
  - "Exceed Expectations" on all surveys (maybe)
  - Triage all incoming incidents within 15 minutes with 95% accuracy on all escalations
  - Diversify portfolio by adding one new customer this FY
  - Develop & deliver X new training classes within the current CY
  - Completion of all projects within the established timeline
- Be sure to communicate your successes!
- **80/20 Rule**

Goals are different from Measures of Success

# Example Cyber Metrics

- Mean-Time-to-Identify
- Mean-Time-to-Contain

- Volume of data transferred using the corporate network

- Number of systems with known vulnerabilities
- Number of users with "super user" access
- Number of SSL certificates configured incorrectly
- Number of communication ports open during a period of time

- Number of days to deactivate former employee account
- Percentage of business partners with effective cyberse

- Frequency of review of third party access
- Frequency of access to critical enterprise systems by

BONUS

PUBLICATIONS

## SP 800-55 Rev. 1

# Performance Measurement Guide for Information Security

f  G+  y

**Date Published:** July 2008

**Supersedes:** SP 800-55 (August 2003); SP 800-80 (May 2006)

## Author(s)

**Elizabeth Chew (NIST), Marianne Swanson (NIST), Kevin Stine (NIST), Nadya Bartol, Anthony Brown, Will Robinson**

### Abstract

This document provides guidance on how an organization, through the use of metrics, identifies the adequacy of in-place security controls, policies, and procedures. It provides an approach to help management decide where to invest in additional security protection resources or identify and evaluate nonproductive controls. It explains the metric development and implementation process and how it can also be used to adequately justify security control investments. The results of an effective metric program can provide useful data for directing the allocation of information security resources and should simplify the preparation of performance-related reports.

### Keywords

Information Security; Metrics; Measures; Security Controls; Performance; Reports

## Control Families

Security Assessment and Authorization; Maintenance; Planning; Program Management;

### DOCUMENTATION

**Publication:**
⎘ SP 800-55 Rev. 1 (DOI)
🗎 Local Download

**Supplemental Material:**
None available

### TOPICS

**Security and Privacy**
audit & accountability; maintenance; planning; risk management

**Laws and Regulations**
OMB Circular A-11

# Performance Measurement Guide for Information Security

**Elizabeth Chew, Marianne Swanson, Kevin Stine, Nadya Bartol, Anthony Brown, and Will Robinson**

# I N F O R M A T I O N    S E C U R I T Y

Computer Security Division
Information Technology Laboratory
National Institute of Standards and Technology
Gaithersburg, MD 20899-8930

**July 2008**

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# Homeland Security

Topics | News | In Focus | How Do I? | Get Involved | About DHS

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## Securing Federal Networks

- **CDM**
- EINSTEIN
- Federal Information Security Management Act
- Information Systems Security Line of Business
- Managed Trusted Internet Protocol Services
- National Cybersecurity Protection System
- Network Security Deployment
- Risk Management Framework Assessment and Authorization Service Offerings
- Situational Awareness and Incident Response
- Trusted Internet Connections

# Continuous Diagnostics and Mitigation (CDM)

Consistent with the Federal Government's deployment of Information Security Continuous Monitoring (ISCM), the Continuous Diagnostics and Mitigation (CDM) Program is a dynamic approach to fortifying the cybersecurity of government networks and systems. The CDM Program provides DHS, along with Federal Agencies with capabilities and tools and identify cybersecurity risks on an ongoing basis, prioritize these risks based on potential impacts, and enable cybersecurity personnel to mitigate the most significant problems first. Congress established the CDM program to provide adequate, risk-based, and cost-effective cybersecurity and more efficiently allocate cybersecurity resources.

Collapse All Sections

## How CDM Works ‒

The CDM approach is consistent with guidance from the Office of Management and Budget (OMB) and the National Institute of Standards and Technology (NIST) and helps meet federal reporting requirements. CDM offers industry-leading, commercial off-the-shelf (COTS) tools to support technical modernization as threats change. To start, agency-installed sensors are deployed and perform an on-going, automated search for known cyber flaws. Results from the sensors feed into an agency dashboard that produces customized reports that alert network managers to their most critical cyber risks. Prioritized alerts enable agencies to efficiently allocate resources based on the severity of the risk. Progress reports track results, which can be used to compare security postures among agency networks. Summary information feeds into a Federal enterprise-level dashboard to inform and provide situational awareness into cybersecurity risk posture across the Federal Government.

## CDM Phases ‒

The CDM Program is organized by phases, as identified in the diagram shown here and further describes below.

PUBLICATIONS

# Cyber Security Metrics and Measures

**Published:** March 02, 2009

## Author(s)

**Paul E. Black**, **Karen A. Scarfone**, **Murugiah P. Souppaya**

## Abstract

Metrics are tools to facilitate decision making and improve performance and accountability. Measures are quantifiable, observable, and objective data supporting metrics. Operators can use metrics to apply corrective actions and improve performance. Regulatory, financial, and organizational factors drive the requirement to measure IT security performance. Potential security metrics cover a broad range of measurable features, from security audit logs of individual systems to the number of systems within an organization that were tested over the course of a year. Effective security metrics should be used to identify weaknesses, determine trends to better utilize security resources, and judge the success or failure of implemented security solutions.
**Citation:** Article in Wiley Handbook of Science and Technology for Homeland Security
**Publisher Info:** John Wiley & Sons, Inc., Hoboken, NJ
**Pub Type:** Books

## Download Paper

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## Keywords

computer systems, cyber security, homeland security, IT, measures, metrics, software
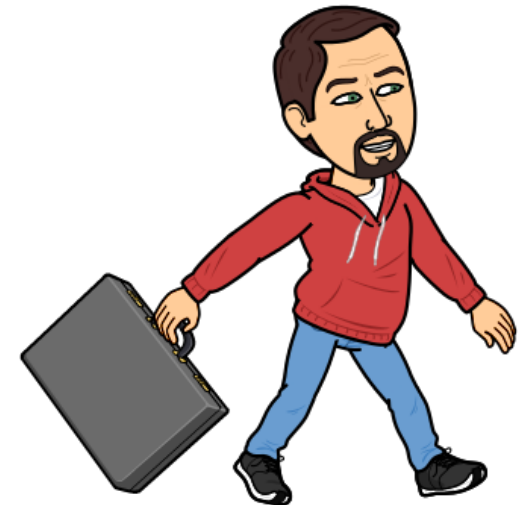
Software testing

# Anything You Can Do, …

# Do Your Job… Not Theirs

- Why do you have your job?
- Set realistic expectations
    - THEY ARE NOT THE SAME PERSON AS YOU
- "Trust but verify"
    - What is your **_"Mistake Tolerance"_**
- Build the Business Bridge
    - LEARN THE BUSINESS
    - Become the HOW & WHY person
    - Expand your vision
- Be a problem solver
- Build your internal and external network

# Techie Challenges

- "You are not laying bricks"
- Scalability & Redundancy
  - It's important to identify bottlenecks (Is it you?)
  - What happens when Jane goes on vacation?
  - Are there any other SPOFs?
- How can YOU best help your team?
  - Eliminate road blocks
  - Organize and Prioritize
  - Set expectations
  - Help on the really hard problems
  - Motivate! (next slide)
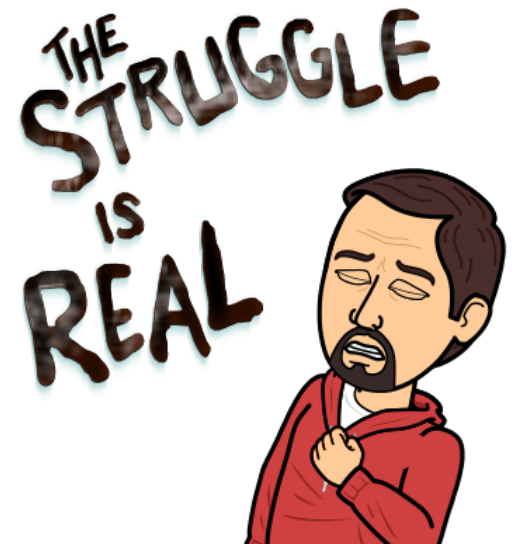
# Motivating Cybsecurity Engineers

- Meaningful work

- Communication

- Get buy-in… "I NEED your help"

- Swag (and tools to be successful)

- Growth (e.g., training, seminars, conferences)

- "Show me the money!"

- "Where's the love?"

# First Things First

- Benefits of a daily stand-up

  - Set daily expectations for effort

  - Increase communication

  - Face-to-face time

  - Team unity

- Best practices for a stand-up meeting

  - Actually stand

  - Keep it short, 5-10 minutes

  - Answer 3 questions

    – What did you get done yesterday?

    – What are you doing today?

    – Do you have any blockers?
      (Make sure you take action on the blockers!)

No phones!
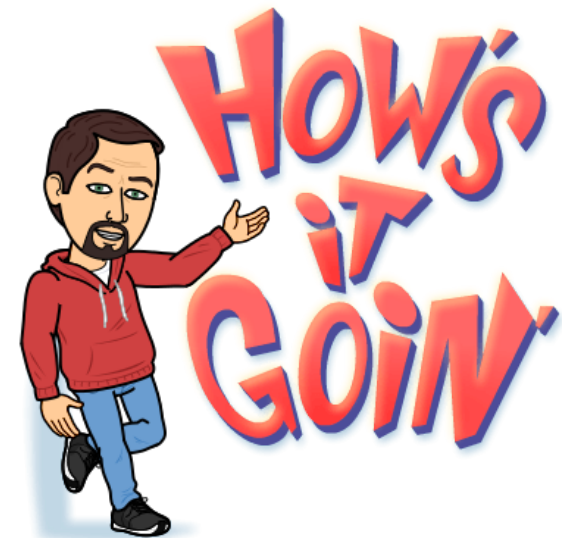
# Expectation Setting

- Set realistic timelines

- Ensure commitments are achievable
  (even if they are difficult)

- Have a backup plan

- Be prepared for disciplinary action

- Get buy-in from the team
  (Their idea/schedule is even better)

- **Be SPECIFIC**
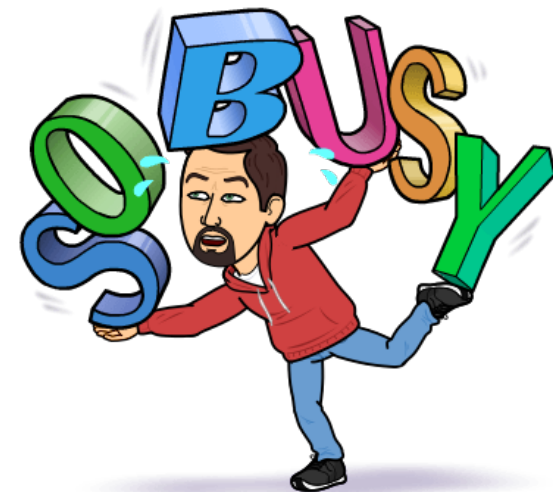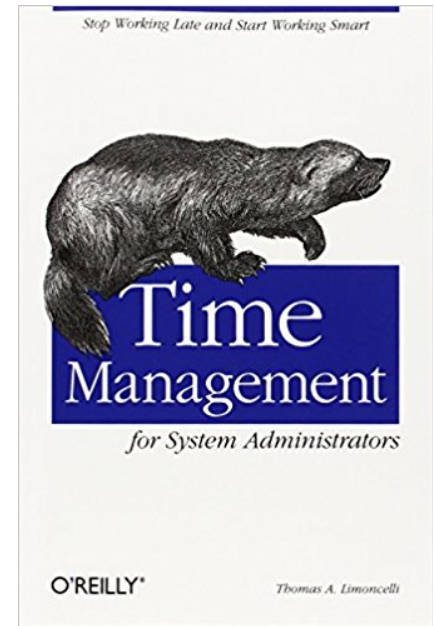  - Examples of success
  - Areas of improvement

# Time Management Tips

- Minimize interruptions.
  - Establish email time
  - Change how you read/organize email
  - Turn off notifications
  - How 'bout chat?
- Keep your work area tidy
  - Organized = quicker to find
  - Clean = room to work without distraction
- Manage your meetings better (next slide)
- Maintain a ToDo list (slide after next)

# Meeting Management

- How many meetings do you have in a typical day?  Week?
    - How many are meetings that you've scheduled?
- Control what you can control
    - Walk & Talk, Lunch, Happy Hour, Coffee
    - Setup meetings with just you
    - Establish meeting-free days
    - Consolidate meetings on "meeting days"
    - Have one calendar for everything

# The ToDo List

Benefits

- Accountability

- Visibility

- Job satisfaction

My example

- Adapted from Scrum/Agile Kanban board

| Customer Status | Goals | ToDo | Doing | Done | Accomplishments |
|---|---|---|---|---|---|
| Yankees: Left a VM for George on 2/1 regarding Cito's new contract | Sign 10 new players | Scouting combine in March | Player evaluations from MSU Pro Day | J.Arcane contract 1/15 | J.Arcaine, 1.5M on 1/15 |
| Mets: J.Arcane contract signed on 1/15 for 1.5M | Grow player placements from 2 to 5 teams this year | Call Henry H. | Teaching scouting clinic this week | Player evaluations for the OU pro day (1/10) | |
| Astros: They have expressed interest in finding a right handed reliver.  Need to talk to them about J.Allen | | Presentation for Owners meeting | | Onsite meeting with Mets (1/4) | |

# http://personalkanban.com/pk/personal-kanban-101

work is carried out.

Unlike other personal productivity tools, Personal Kanban is a pattern – it is not an edict. You can mold it into whatever shape or form works best for you at the time. Personal Kanban is also scalable – it can work with just you, or with your family, or even with work groups.
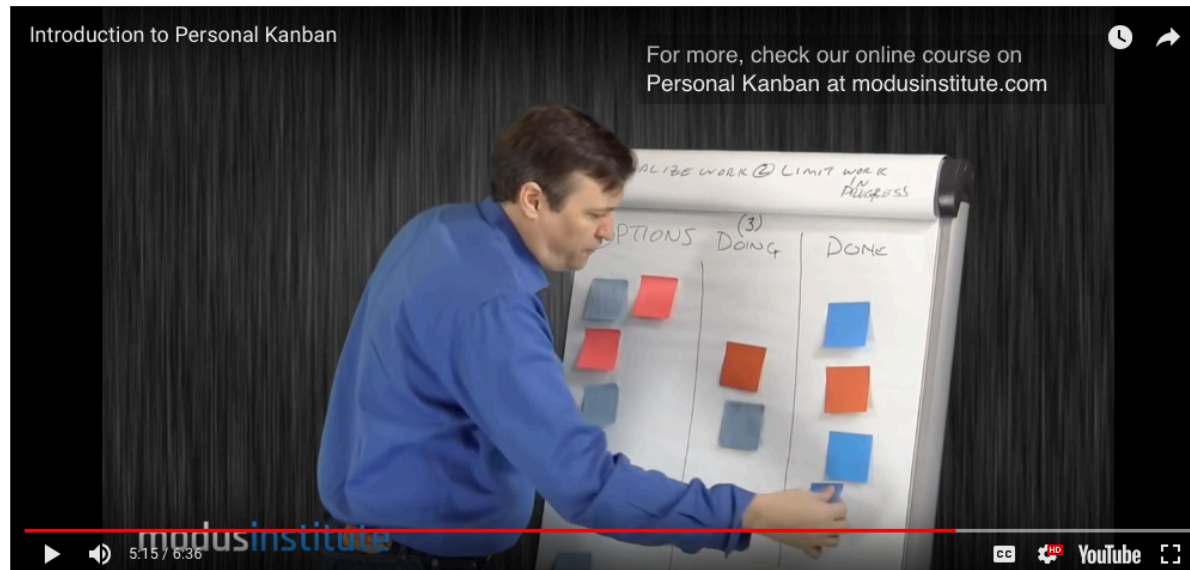


There are only two real rules with Personal Kanban:

**1. Visualize your work**

**2. Limit your work-in-progress**

# Leadership/Management Tips

- Find value in everyone, and ways for each to contribute
- Be a people person
- Sympathetic to other ideas and points of view
- Be sincere
- WIIFM v WIIFT
- Match WIIFT with your/business needs
- Quick to praise and cautious to criticize
- Guide, trust, and even allow them to make mistakes
- Provide opportunities for redemption
- Assume responsibility
- Exceed expectations
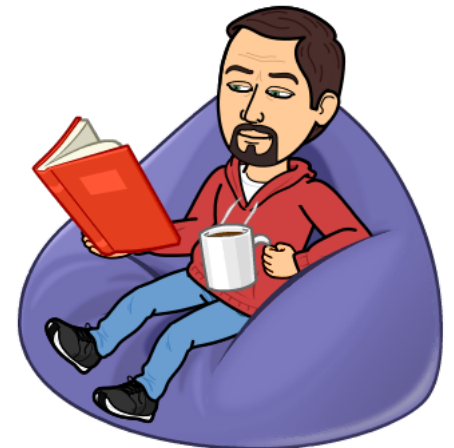- Listen… to everyone
- Stretch yourself

LET'S DO LUNCH

# Homework

- Do one-on-one SWOTs with your team

- Consider implementing a regular stand-up

- Figure out how your team's mission aligns with the organization's mission and clearly communicate that to your team

- Go to lunch more often (and with different people)

- Become an expert in new ways

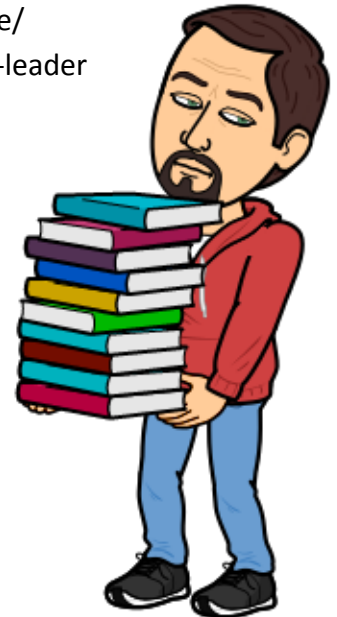  - Find learning opportunities for podcasts, books, on-line classes, etc.

The New One Minute Manager
- One Minute Goals
- One Minute Praises
- One Minute Re-Directs

# Resources

- **http://MindTools.com**
- **http://competentu.com/assessments**
- http://**agilemanifesto**.org/principles.html
- Carnegie, Dale (1936), **How to win friends and influence people**, Simon and Schuster, Inc.
- https://medium.com/@beaugordon/key-takeaways-from-**team-of-teams**-by-general-stanley-mcchrystal-eac0b37520b9
- **Giuliani**, R. (2002), Leadership, Hyperion Books
- Limoncelli, T. (2006), **Time Management** for System Admin, O'Reilly, Inc.
- Blanchard, Den & Johnson, Spencer (2015), The New **One Minute Manager**, Blanchard Family Partnership and Candle Communications, Inc.
- Humphrey, Watts. S. & Over, James W., (2011), **Leadership Teamwork and Trust**, Building a Competitive Software Capability Powell Leadership, Pearson Education, Inc.
- http://theinstitute.ieee.org/career-and-education/career-guidance/from-engineer-to-manager-tips-you-need-to-know568
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- https://venturebeat.com/2016/07/31/when-engineers-become-managers-how-to-be-a-great-technical-leader
- http://www.eweek.com/it-management/the-challenge-of-managing-tech-workers
- http://www.theprivatebusinessowner.com/2010/02/managing-technical-employees

Links are accurate as of October 8, 2018

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