Tim Nolan, Collin County

CAN GIS BE AGILE?

WHAT IS AGILE?

AGILE 101

- Agile was coined in 2001 by software development leaders
  + *Agile Manifesto*
- Iterative & Incremental
- Light-weight
- People-based not plan-based
- Popular Methodologies:
  + *Scrum*, Extreme Programming (XP), Lean

AGILE MANIFESTO

- **Individuals and interactions** over processes and tools

- **Working software** over comprehensive documentation

- **Customer collaboration** over contract negotiation

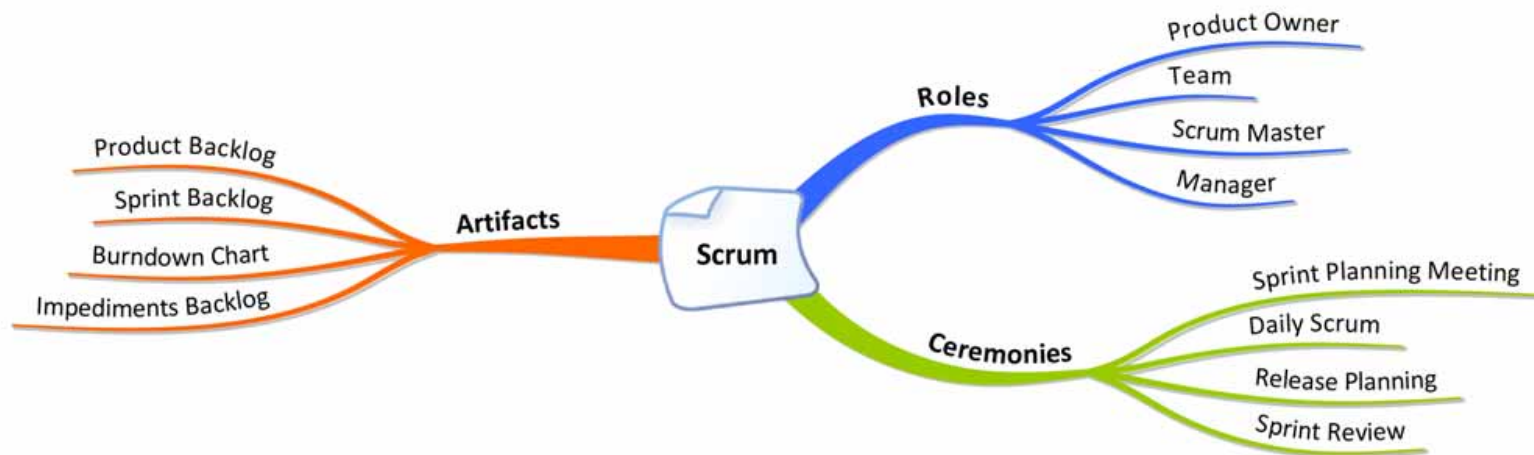- **Responding to change** over following a plan

1. Rapid delivery
2. Welcome changes
3. Working software is delivered frequently
4. Working software is the principal measure of progress
5. Sustainable development
6. Daily co-operation between business and developers
7. Face-to-face conversation (Co-location)
8. Projects are built around motivated individuals, who should be trusted
9. Continuous attention to technical excellence and good design
10. Simplicity
11. Self-organizing teams
12. Regular adaptation

12 PRINCIPLES BEHIND THE MANIFESTO

Source: AgileManifesto.org

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12 PRINCIPLES BEHIND THE MANIFESTO

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SCRUM

CEREMONIES

- Sprint Planning
- Sprint Review
- Sprint Retrospective
- Daily Scrum
- Grooming Session

ARTIFACTS

- Product Backlog
- Sprint Backlog
- Sprint Burndown

ROLES

- Product Owner
- Scrum Master
- Development Team

SCRUM

Easy to understand
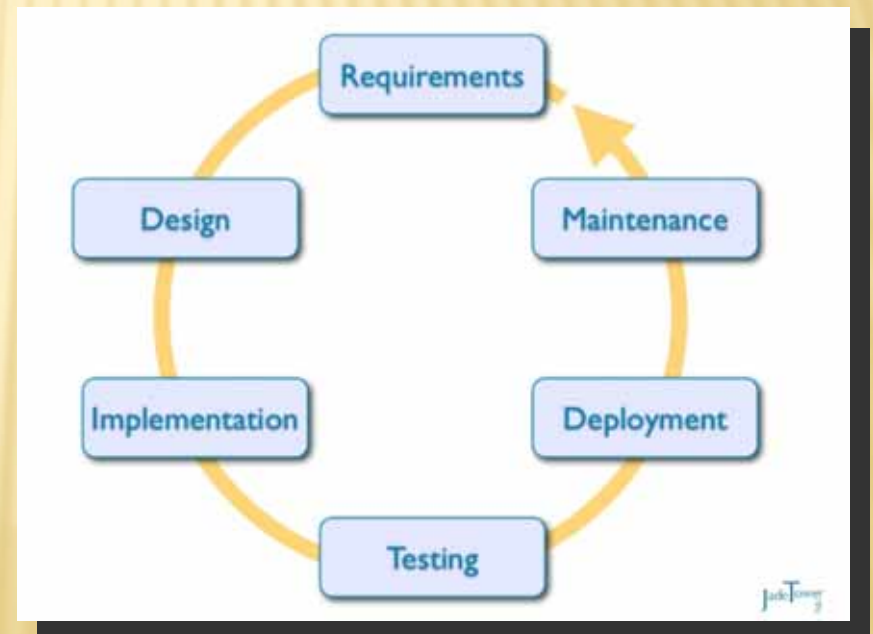Difficult to implement

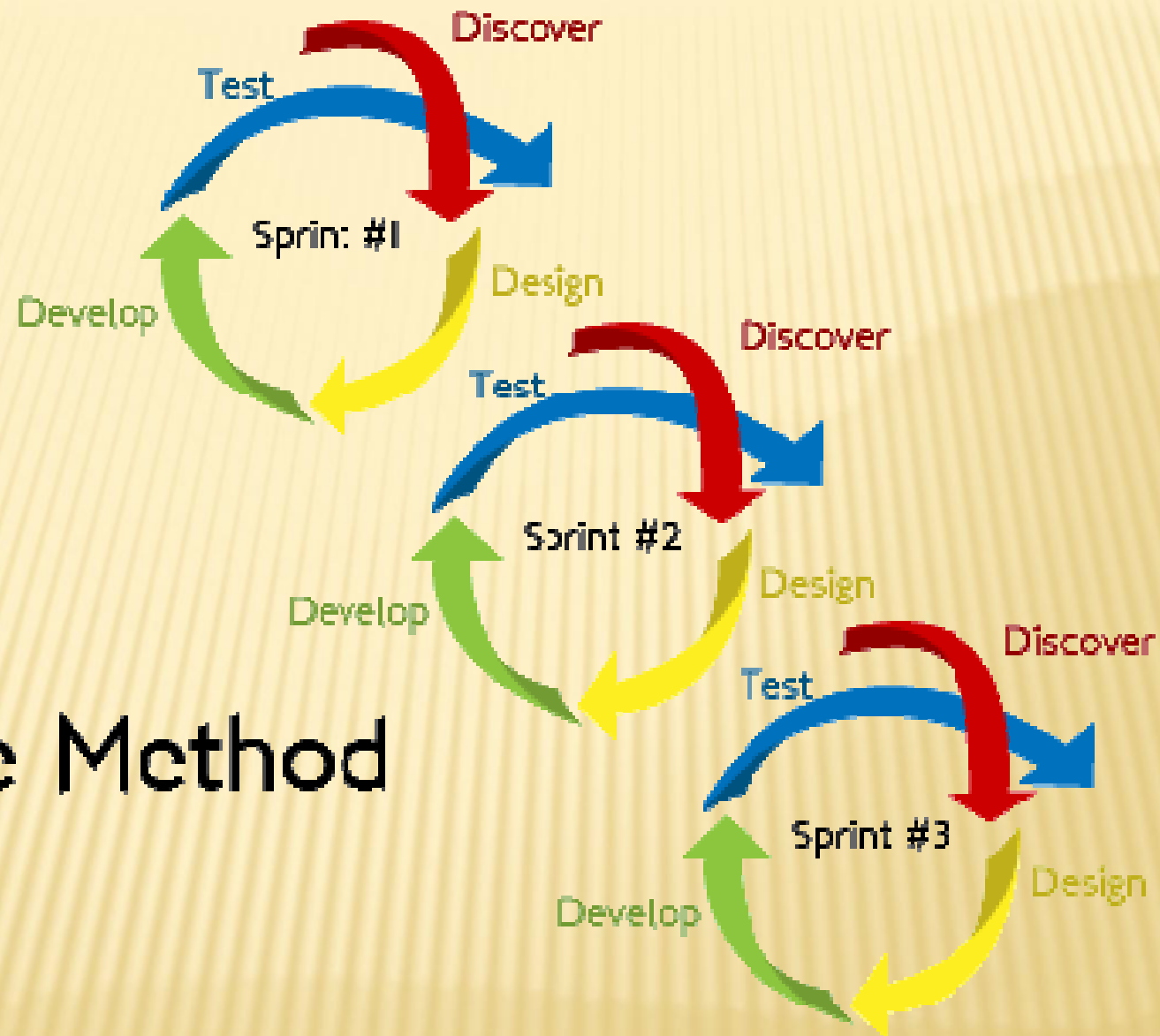# What does this have to do with GIS?

PROJECTS ARE PROJECTS

- Requirements
- Design
- Implementation
- Testing
- Deployment
- Maintenance

GIS is no different!

- Agile = rapid delivery
- Loopy, not linear
- Often at the same time

Agile Method

PEOPLE

- ✖ Identify roles
  - ＋ Scrum Master
  - ＋ Product Owner
  - ＋ Scrum Team
- ✖ Schedule Ceremonies
  - ＋ Daily Scrum
  - ＋ Sprint Planning
  - ＋ Sprint Review
  - ＋ Sprint Retrospective
  - ＋ Story Grooming

OBJECTS

- ✖ Prioritized To-Do list
- ✖ Wall space
- ✖ Sprint Info
  - ＋ Team name
  - ＋ Duration
  - ＋ Ceremonies
- ✖ Index cards
- ✖ Tacks …can't for get tacks

GETTING STARTED

Name:	Spatial Needs Group
Sprint:	FY 2013/06
Duration:	03/28 – 04/09
Sprint Review:	04/10 @ 10:00a
Daily Scrum:	10:00a
Velocity:	28pts

April 2013

Mon	Tue	Wed	Thu	Fri
1 *Sprint 02 Grooming*	2	3 **Sprint 01 Review** **Sprint 01 Retro** **Sprint 02 Planning**	4 **Start Sprint 02**	5
8	9	10	11	12
15 *Sprint 03 Grooming*	16 **Sprint 02 Ends**	17 **Sprint 02 Review** **Sprint 02 Retro** **Sprint 03 Planning**	18 **Start Sprint 03**	19
22	23	24	25	26
29 *Sprint 04 Grooming*	30 **Sprint 03 Ends**			

Title	ID	Owner	Priority	Estimate	Project
Sunset TOP	S-01002	Bret Fenster	High	1.00	Product Backlog

|	Title	ID	Owner	Priority	Estimate	Project
1	Title	ID	Owner	Priority	Estimate	Project
2	Update/Validate Boundary Roads	S-01050		High	13.00	Product Backlog/Sprint GIS - FY2013 - 04
3	Create Model and Run	S-01052			5.00	Product Backlog/Sprint GIS - FY2013 - 04
4	County Roads Renamed & Re-addressed - Anna Address grid	S-01059			3.00	Product Backlog/Sprint GIS - FY2013 - 04
5	Change the Links for AGS	S-01067			3.00	Product Backlog/Sprint GIS - FY2013 - 04
6	Print - Birth Certs Brochure	S-01072			3.00	Product Backlog/Sprint GIS - FY2013 - 04
7	Print - Foreclosure Records Brochure	S-01073			2.00	Product Backlog/Sprint GIS - FY2013 - 04
8	Print (HP) - HR Posters	S-01078			3.00	Product Backlog/Sprint GIS - FY2013 - 04
9	Xerox Scanning	S-01080			2.00	Xerox Backlog/Sprint GIS - FY2013 - 04
10	Research - Compression Schedule for GeoDB	S-01088			2.00	Research Backlog/Sprint GIS - FY2013 - 04
11	Print - Living w/ Diabetes NL	S-01089			2.00	Product Backlog/Sprint GIS - FY2013 - 04
12	Print - Save the Date Landscape 2	S-01090			1.00	Product Backlog/Sprint GIS - FY2013 - 04
13	Print - Insect Workbook	S-01091			2.00	Product Backlog/Sprint GIS - FY2013 - 04
14	Split Roads at City Limits (Carryover 2)	S-01093			8.00	Product Backlog/Sprint GIS - FY2013 - 04
15	Update Parcels	S-01094			3.00	Product Backlog/Sprint GIS - FY2013 - 04
16	Print - MG Bulb Flyer	S-01095			2.00	Product Backlog/Sprint GIS - FY2013 - 04
17	Lucas City Map	S-01096				Product Backlog/Sprint GIS - FY2013 - 04
18	Ad Hoc	S-01097				Product Backlog/Sprint GIS - FY2013 - 04
19	Add ESNs to Service Areas - Fire District using Topology	S-01069			13.00	Product Backlog/Sprint GIS - FY2013 - 05
20	County New Roads to GIS - Light Farms residential	S-01092			5.00	Product Backlog/Sprint GIS - FY2013 - 05
21	GIS / SharePoint Integration	S-01004	Gabi Voicu	High		Product Backlog
22	Interactive Maps Collaboration with CCAD	S-01015		High		Product Backlog
23	PW - PubWorks On-Line Service Request	S-01018	Gabi Voicu	High		Product Backlog
24	ArcGIS in the DMZ	S-01020		High		Prodcut Backlog
25	GIS Remediation	S-01023		High		Product Backlog
26	Service Areas	S-01024		High		Product Backlog
27	Collin County GeoDB Clean-up	S-01025		High		Product Backlog
28	PW - PubWorks Implementation	S-01029		High		Product Backlog
29	PW - GIS Integration with PubWorks	S-01030		High		Product Backlog
30	ENG - Stormwater Management Project	S-01032		High		Product Backlog
31	Thoroughfare Plan	S-01033		High		Thorough Backlog
32	TN Matching - GIS Remediation	S-01035		High		Product Backlog
33	GeoDB Replication Validation with NCTCOG	S-01039		High		Product Backlog
34	Wylie ILA	S-01041		High		Product Backlog

USER STORIES

- As a *<role>* I want *<goal/desire>* so that *<value>*

- As a *GIS'r*, I want *to use the city boundaries and roads to create the ESNs for the Service Area layer* so that *our Service Area layer will be as accurate as possible*.

ESTIMATING EFFORT

- ✖ Planning poker
- ✖ Fibonacci sequence
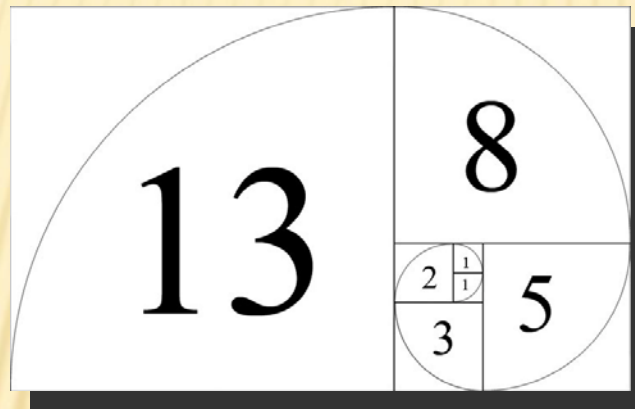
SPRINT PLANNING
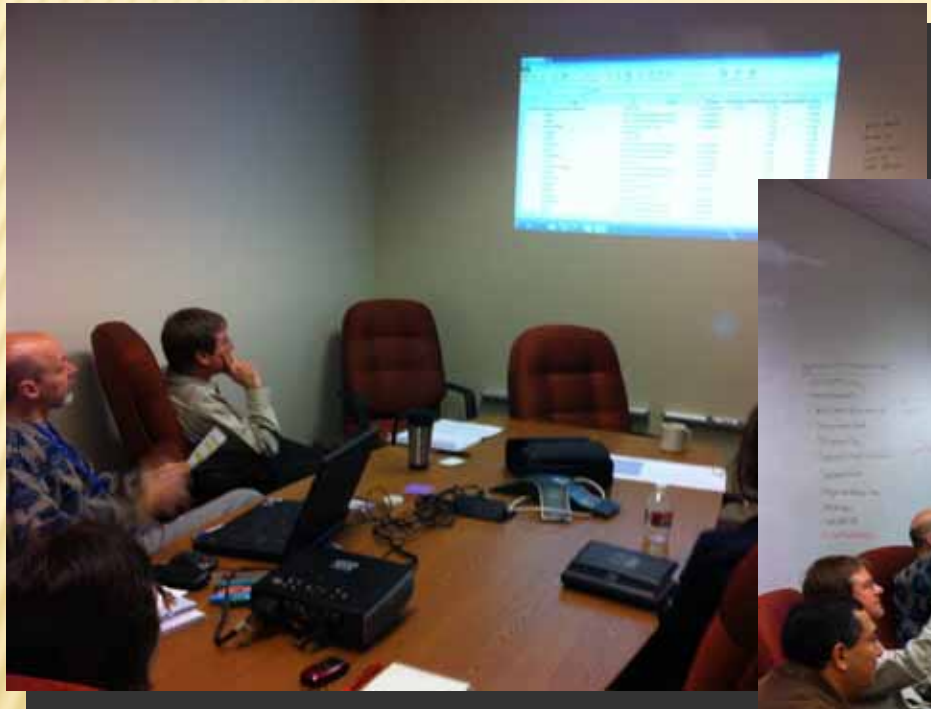
- Prioritize Backlog
- Develop Stories/Tasks
- Acceptance Criteria
- Estimate Effort

TO DO,   DOING,   DONE

MUST ANSWER ME THESE QUESTIONS THREE

- ✖ What did I do yesterday?
- ✖ What am I doing today?
- ✖ What is in my way (impedences)?

SPRINT REVIEW

- Discuss Story Status
- Acceptance Criteria Met
- Close/Split/Bounce Stories and Tasks
- Demos
- Quick Meeting

SPRINT RETROSPECTIVE

- Good, Bad, Ugly
- Sprint Starfish
  - Keep doing
  - Stop doing
  - Start doing
  - More of
  - Less of
- Be Thorough
- *No Management or Customers!!!*

OUR 1ST SPRINT

OUR 1ST SPRINT

- Stories Too Big → Epics
- Undersized
- Incomplete
- Not Enough Commitment
- Sprint vs Other Work

CONTINUOUS IMPROVEMENT

METRICS – BURNDOWN CHARTS
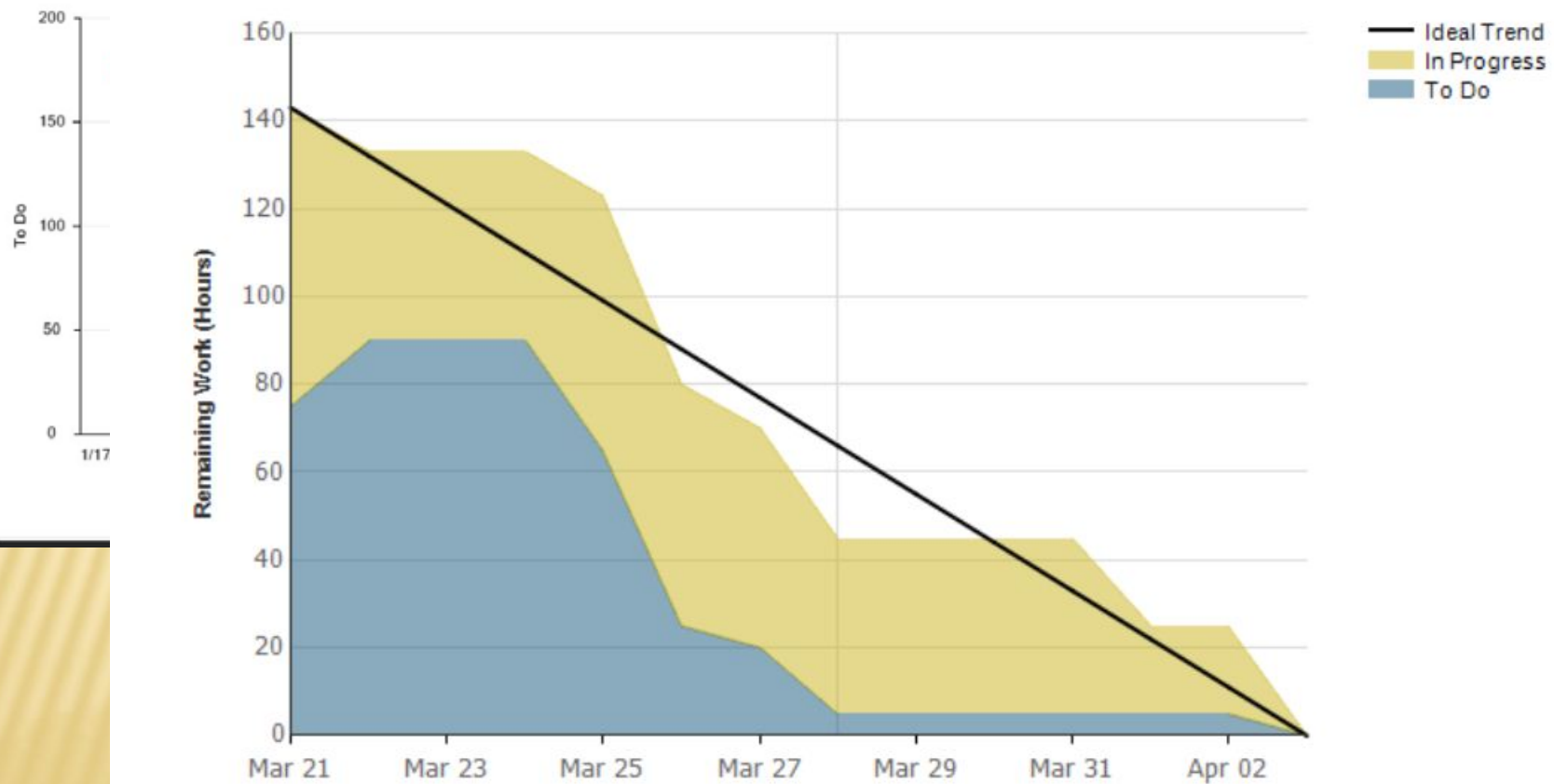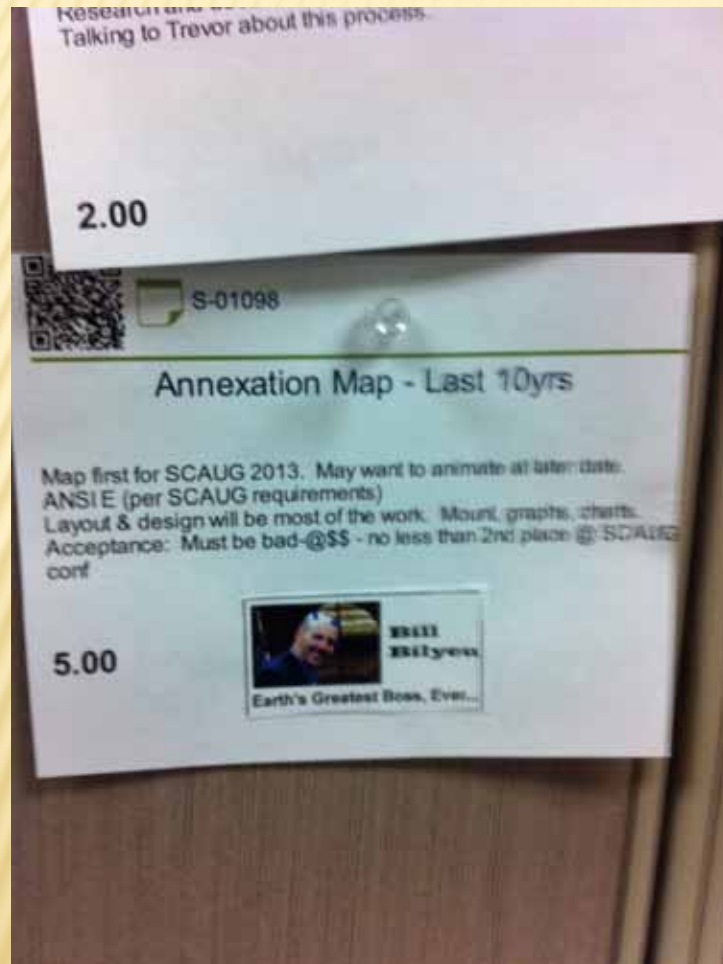
METRICS - VELOCITY

PERSONALIZE

OBSERVATIONS

- Not as smooth as expected
- Many ways to do the same thing
- Trouble reaching consensus
- Too many Ad hoc requests
- Difficult to plan
- Culture
- Definition of done

ENCOURAGEMENT

- Don't let perfection be the enemy of good
- "Next Sprint"
- Clear & Concise direction
- Daily praise & gratification
- Completing work daily
- Daily progress

You Can Do It!

NEVER EVER EVER GIVE UP!
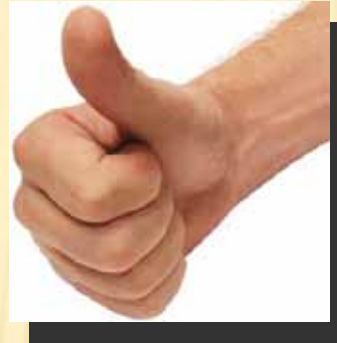
QUESTIONS?

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www.linkedin.com/in/nolantim

youtube.com/watch?v=U__m4N7Ml30

Judas Priest Concert, Reunion Arena 1986