Lean, Kanban, and Large-Scale Agile

presented by James Shore

Twitter: @jamesshore

Blog: http://jamesshore.com

Email: jshore@jamesshore.com

Philly ETE I I April 2012, Philadelphia PA

Enterprise Agile

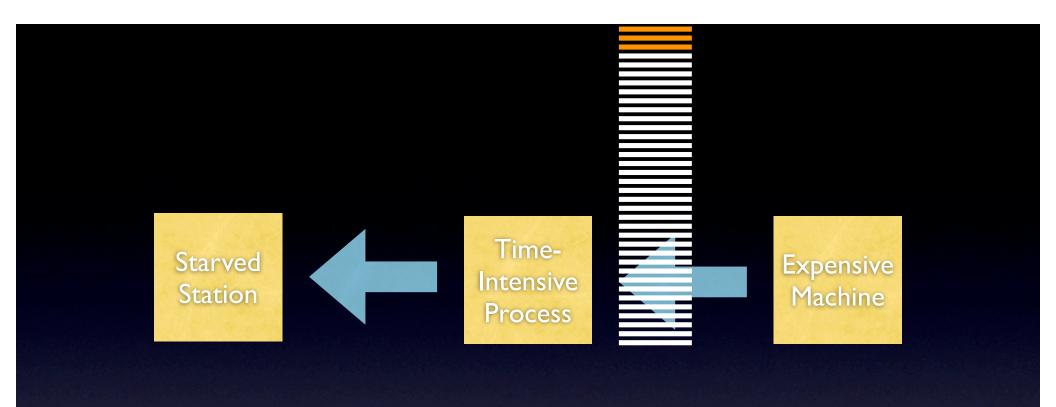
- I. Hire a Scrum trainer
- 2. Train everyone in Scrum
- 3. ???
- 4. ???
- 5. ???
- 6. Soul-Crushing Defeat

Large-Scale Agile

Interdependent Agile Teams



http://plysandplus.wordpress.com/2009/11/28/over-optimization/



Traditional Manufacturing

Starved Station

Time-Intensive Process

Expensive Machine

Traditional Manufacturing



One-Piece Flow

Starved Station

Time-Intensive Process

Expensive Machine

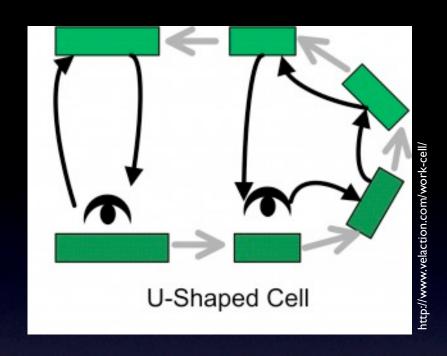
Lean Manufacturing

"The challenge is to develop a learning organization that will find ways to reduce the number of kanban... So kanban is something you strive to get rid of, not to be proud of."

--Jeffrey Liker, The Toyota Way



http://leansoftwareengineering.com/2007/12/07/we-cant-afford-to-trust-everyone-on-larger-teams/





"[W]e arranged machines in parallel lines or in an L shape and tried having one worker operate three or four machines along the processing route... Our craftsmen did not like the new arrangement requiring them to function as multi-skilled operators."

-- Toichi Ohno, as quoted by Jeffrey Liker, The Toyota Way

Concept Requirements Design Build & Test

- Vision & Strategy
- Define roles and responsibilities
- Define Change Management process
- Communication
 Plan
- Concept level Schedule and Budget estimation

- "AS-IS" environment analysis
- Biz rules and Tech Dependencies
- Competitor analysis
- Product
 Requirements
 (Process models,
 User cases,
 Activity diagrams)
- Document "TO-BE" product

- Technical Feasibility
- UI Design, Visual, Creative
- Proof of Concept / Prototyping
- Full architecture, Product & Systems
- SEO
- Re-estimate Schedule and Budget

- Web coding (Creative + code + SEO)
- Unit testing
- Integration testing
- Code reviews
- Test cases execution
- Bug fixing cycles
- Beta Readiness
- UAT
- Support Plan
- Release checklist

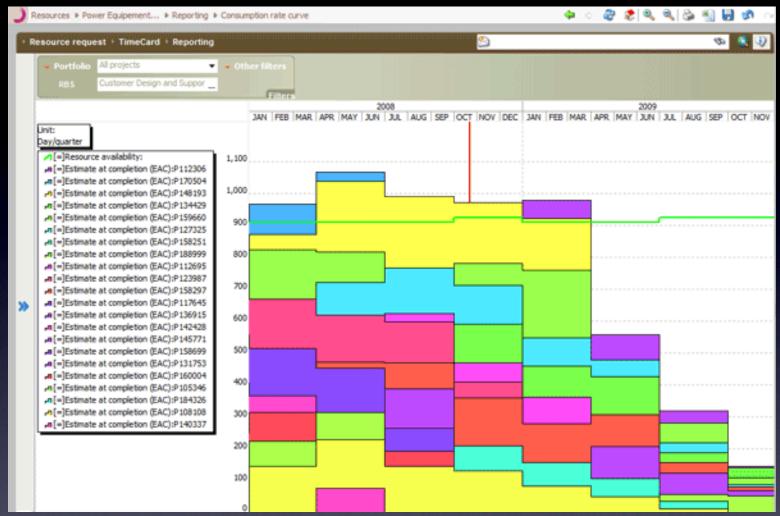
Web release

Release

- Live Test
- Transition to Support & Maintenance
- Lessons Learned

http://opensdlc.org/mediawiki/index.php?title=SDLC_Gates_Framework

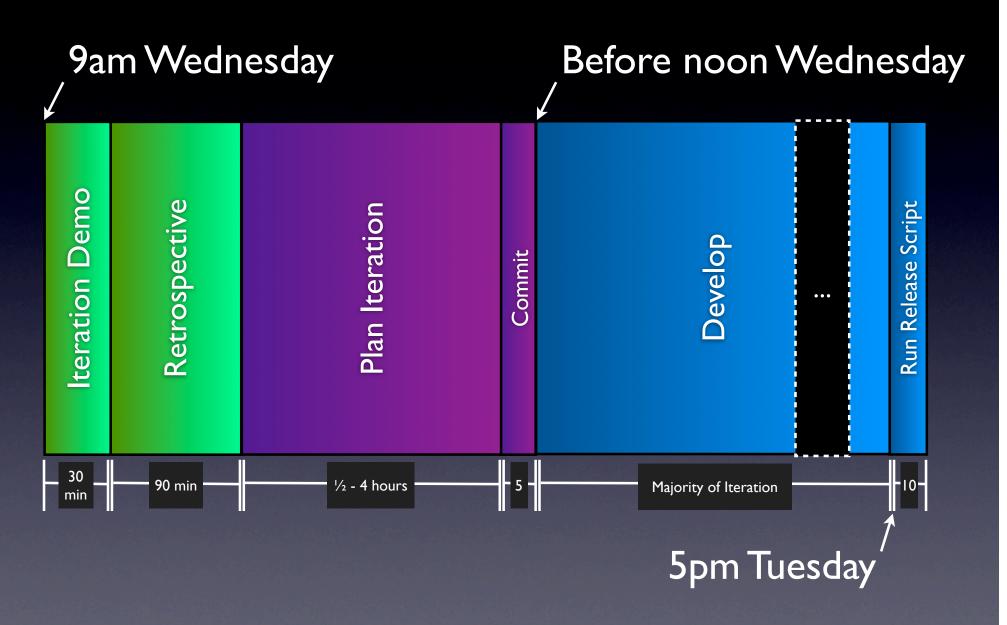
Phase-Gate Lifecyle



http://www.planisware.com/main.php?docid=15567

Phase-Gate Resource Shaping

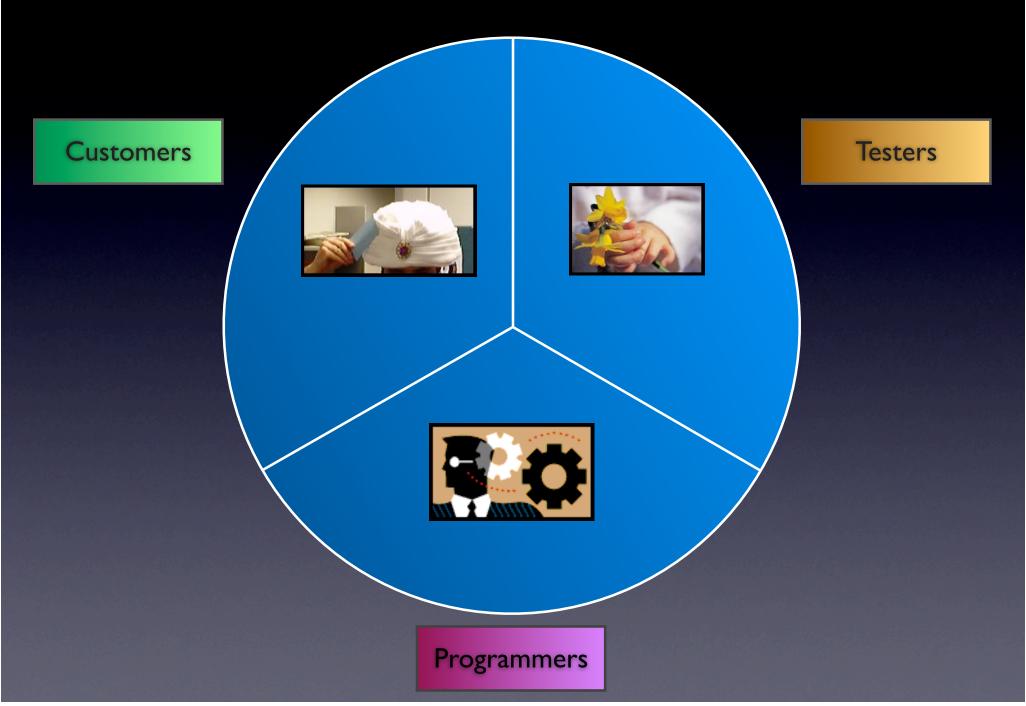
The Iteration Lifecycle

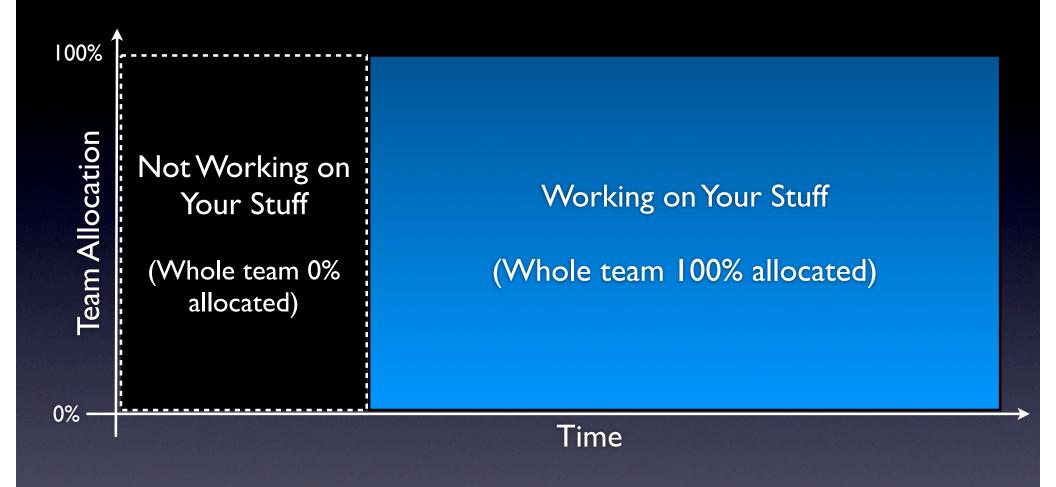


The Iteration Lifecycle

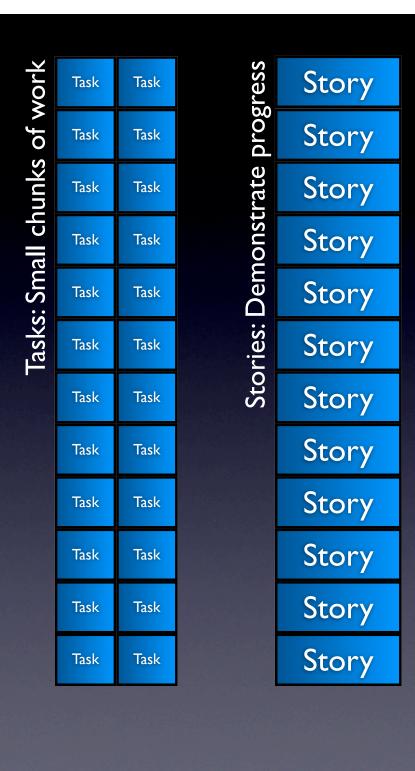
Commit	Plan	
	Analyze	
	Design	
	Code	
	Test	
	(Automate) Deployment	

Cross-Functional Teams





Agile Resource Shaping



MMFs: Releasable to market **MMF MMF** MMF Vision: The value we're seeking

Vision Vision

Agile
One-Piece Flow

Agile Team: Large-Scale Agile

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Lean Work Cell: Lean System

To Do Large-Scale Agile Well

You Must First

Do Single-Team Agile Well

(Enterprise "Agile" Need Not Apply)

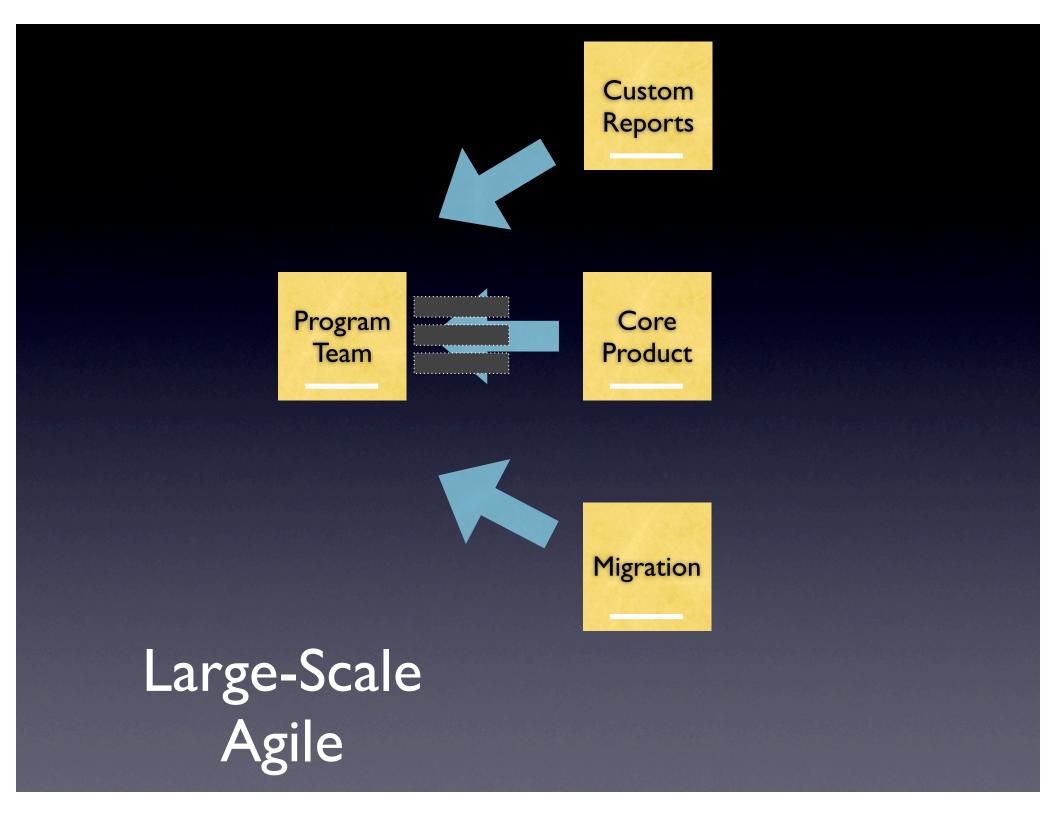
Create Work Cells

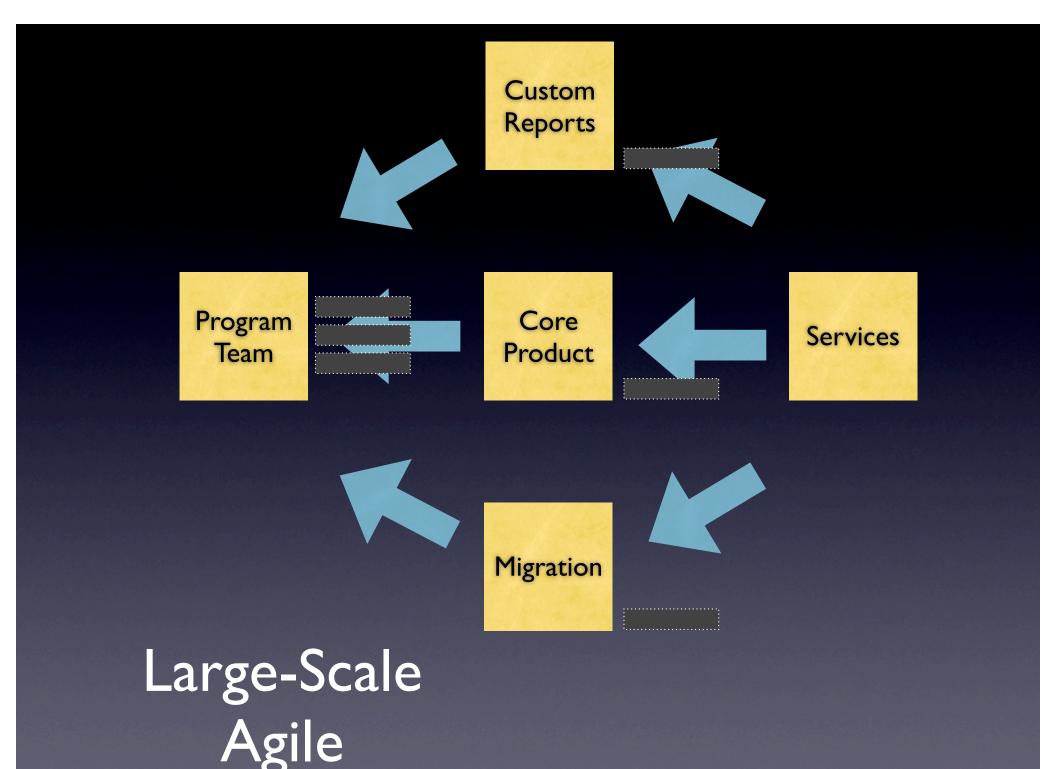
6

Coordinate Teams with Kanban

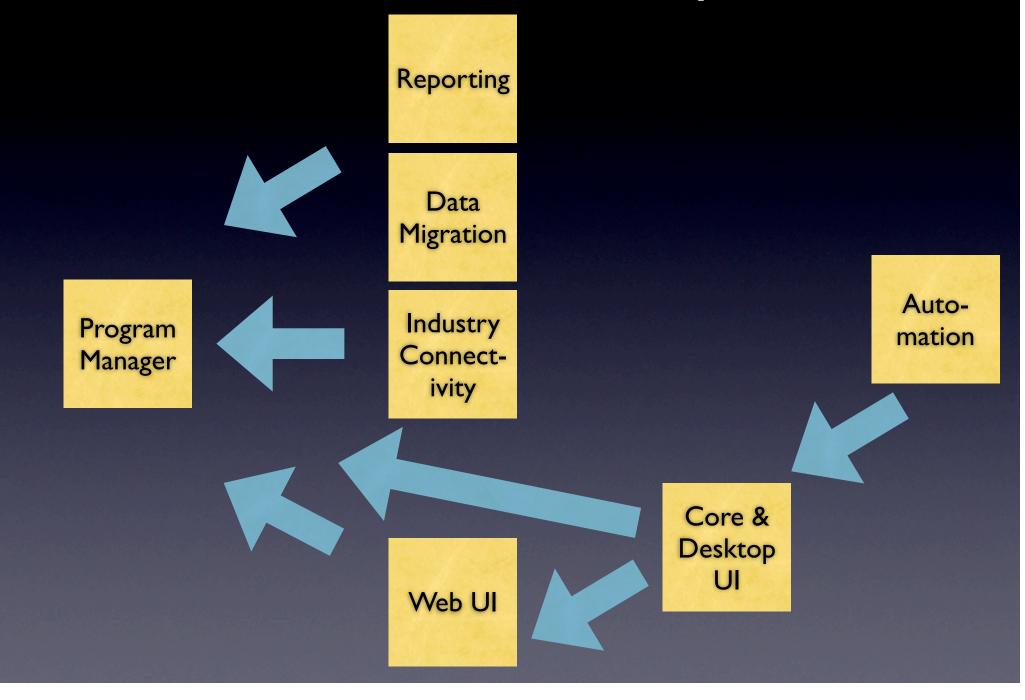


Large-Scale Agile (Poor)





Real World Example



Respect the Software

- 1. One team per bounded context
- 2. Team ownership of code quality
- 3. Long-lived teams

Respect the System

- 1. Minimize hand-offs and number of teams
- 2. Favor throughput over re-use
- 3. Feral architects & learning organization

Respect the People

- I. Visual control & defined interfaces
- 2. Overlapping stand-up circles
- 3. Self-organizing, cross-functional teams who fully own their work

Respect Competence

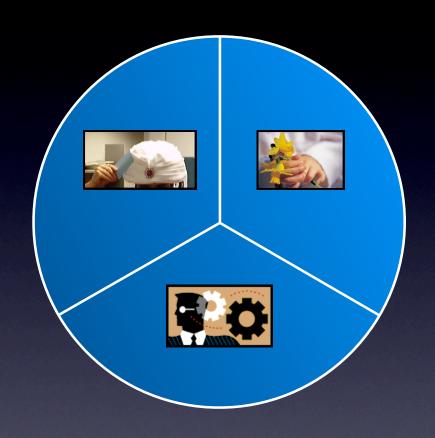
To

Do Large-Scale Agile Well

You Must First

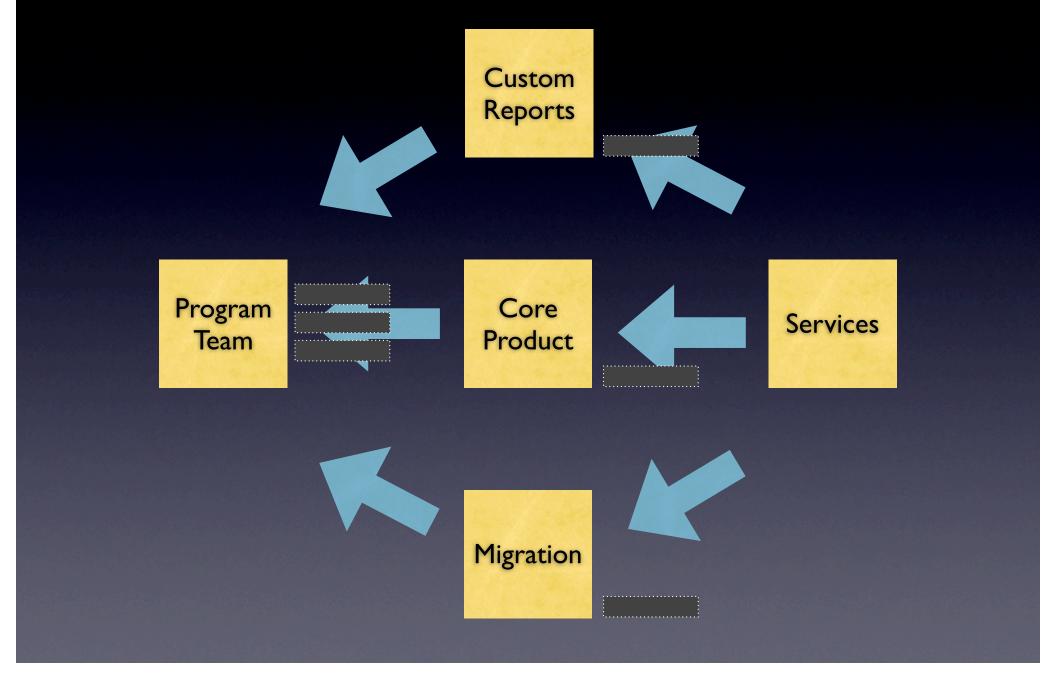
Do Single-Team Agile Well

I. Competent Agile Teams



Plan
Analyze
Design
Code
Test
(Automate) Deployment

2. One-Piece Flow with Kanban



3. Create a Learning Organization

"The challenge is to develop a learning organization that will find ways to reduce the number of kanban... So kanban is something you strive to get rid of, not to be proud of."

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Blog: http://jamesshore.com

Email: jshore@jamesshore.com

Upcoming training, Apr 23-27: artofagilenyc.com

Philly ETE I I April 2012, Philadelphia PA