What IV&V Can Learn from Whitewater Rafting Guides

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Agenda

- Background on rafting
- Lesson 1: The “Big Picture” is made up of many small details
- Lesson 2: Sweat the small stuff
- Lesson 3: When in doubt, eddy out
- Lesson 4: Make a splash!

One good looking boatload of IV&Vers!
General Tips for Successful Rafting

- Travel with an experienced trip leader/guide.
- River travel is a group effort – everyone paddles!
- Before starting a journey, boaters should become knowledgeable about local conditions.
- Never fight the current!
- Know what you are looking at, and watch out for obstacles/dangers downstream.
- Have a plan in place for sudden obstacles.
- When stuck on/by an obstacle, be ready to try different approaches
  - Sometimes you have to rock the boat
  - Sometimes everyone needs to move to one area
  - Sometimes you just have to get assistance from other boats.
- Never tie boaters to the craft.
Raft Guides

- Usually independent contractors
- Paid by the trip and tips (“If you liked your ride, tip your guide!”)
- Training includes river navigation, first aid and swift water rescue
- Tools of the trade: Paddle, throw rope, river knife and whistle
- Responsible for customer safety on and off the river
Lesson 1: The “Big Picture” is made up of many small details

- Quote from the archetypal river guide John Wesley Powell:
  “You cannot see the Grand Canyon in one view, as if it were a changeless spectacle from which a curtain might be lifted, but to see it you have to toil from month to month through its labyrinths.”

- For IV&V, the Mission is our Grand Canyon
You Can’t Step Into the Same River Twice

- River level changes daily
  - Need to learn to “read the river”
  - Different flow means different hazards and approaches

- White Water ≠ Random
  - It is predictable within a range
  - The river banks remain the same
  - Large obstacles remain the same
Variability and Volatility are the NORM!

- Information Flows/Navigation
  - How various documents work with each other
  - Concept ➔ Design ➔ Test ➔ Implementation
Lesson 2: Sweat the small stuff

- High likelihood hazards are likely to happen
- Mitigation is important even for low impact hazards
- Most injuries on a river trip happen on shore or getting on shore
- Where the customer is most comfortable is often where bad things happen, because less attention is being paid to the situation
Lesson 3: When in doubt, eddy out

- Mindfulness – Having a plan but paying attention to the moment
- “Controlled urgency, rather than no urgency or chaos, ... facilitated successful problem-solving.” [Itabashi-Campbell, Gluesing and Perelli, 2012]
Lack of Visibility = Danger
Plan ahead of time how you are going to approach obstacles
Eddying out, IV&V style

- Controlled Urgency – If volatility increases as you approach a deadline, so will your value

### Initiation
- Assignments Made
- Mission Contacts Established
- IV&V Heritage Review Conducted

### Planning
- Scope and Technical Rigor Established
- Resource Needs, Schedule Developed
- IPEP (WBS instantiated, Scope, Schedule)

### Review
- Review of schedule, approaches, knowledge

### Execution
- Execute Schedule, Resources
- Maintain Scope & Awareness
- Deliver products
- Manage Knowledge

### Close
- Close out report
- Shrink wrap IV&V products

Remember this transition!
Lesson 4: Make a splash!

- Guides need to know business practices in addition to the river
- Customers expect it
- Maximizing the ‘excitement’ in safe ways
  - Maximize our impact to the Mission
  - Need to take close look at issue severity and assurance statement(s)
What this means for IV&V

- **Lesson 1: The “Big Picture” is made up of many small details**
  - Volatility is inevitable
  - See the forest and the trees

- **Lesson 2: Sweat the small stuff**
  - Do not allow a break in activity to lull you into a false sense of security

- **Lesson 3: When in doubt, eddy out**
  - A sense of “controlled urgency” maximizes productivity
  - Look for calm spots to regroup and reorient

- **Lesson 4: Make a splash!**
  - Know what your customers want and need (not always the same thing)
  - Make sure your work makes an impact
Controlled urgency, rather than no urgency or chaos, is the third condition that facilitated successful problem-solving. All successful stories were associated with one or more of the following attributes: high pressure from the customer or management, safety-critical problems, or imminent deadlines for resolution. In such instances, problem-solving was “high-paced,” driven by “a controlled sense of urgency,” and “exciting.” In contrast, all less successful initiatives were associated with helplessness arising from either a chaotic environment or a lack of environmental urgency. Chaotic situations entailed “getting a lot of help and advice from people you don’t need,” “going into all kinds of escalation modes,” or “lots of emotions and stress and then [. . .] panicking.” Organizational inertia was prompted by having a “this is the way that we have always done it” attitude, a “low occurrence rate,” being “not visible to the customer,” and “lack of financial pressure.”
Q: How do river guides get to work?
A: Rapid Transit!
GO TO RAFTING THEY SAID

IT WILL BE FUN THEY SAID
Attributions

- Slide 3
  - http://www.meetup.com/Beyond-Adventure/events/126571512/event_202320712.jpg

- Slide 5

- Slide 6
  - http://rafting.co.uk/Thompson_River_Rafting.htm/clip_image002_021.jpg

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  - http://commons.wikimedia.org/wiki/File:Papasidero_lao_rafting.JPG

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  - http://www.paddling.net/guidelines/showArticle.html?243
  - http://www.wetplanetwhitewater.com/rafting/class-system/

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  - http://www.brownguides.com/blog/how-georgia-rivers-work/

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Thank you