

CS 428 – Webster readings #3

Winter 2019

Bruce F. Webster

“The Longest Yard: Reorganizing IT for Success” (Cutter IT Journal, 2006) [[Link](#)]

- ▶ (Co-authored with Ruby Raley, long-time colleague and friend)
- ▶ Many corporate organizational practices originated with the rise of the Industrial Age and into early 20th century corporations
- ▶ They bear little resemblance to what is needed to effectively recruit and manage IT workers in the 21st century
- ▶ Suggested idea: approach IT recruitment, training, and management from a sports team perspective rather than a manufacturing perspective
- ▶ Offered as a thought-experiment to reconsider current approaches
- ▶ We used football since Ruby & I know that game better than others, but remember these are just analogies

Personnel: Recruiting

- ▶ IT recruiting often focuses on checkbox items, puzzle solving, # of bodies
- ▶ Sports teams focus on finding, evaluating, recruiting small number of highly talented professionals to fill specific needs of the team
- ▶ How might this look in IT?
 - ▶ Recruit based on evaluation, recommendation and reputation
 - ▶ Focus on TEPEs: talent, education, professionalism, experience, skills
 - ▶ Work within a team size limit and an overall salary cap
- ▶ Don't hire just for the sake of hiring someone
- ▶ Avoid overpaying new hires and underpaying proven performers

Personnel: Organizing the Team

- ▶ Quarterback: chief software architect
 - ▶ Most visible player and directs efforts
 - ▶ Needs to be skilled at her/his position, but not at all positions
- ▶ Mutually-supporting team members with a common goal
 - ▶ Great quarterback can compensate some for a weaker team, and vice versa, but you really need a great quarterback and a great team
 - ▶ Team achievements need to be met with team recognition and team rewards
 - ▶ Team goals need to support and meet individual goals

Coaching

- ▶ We spend lot of money on IT engineers but very little on improving their skills, education, and performance via active coaching
 - ▶ Managers do not necessarily see themselves as coaches
 - ▶ Organizations usually lack 'specialty' coaches
- ▶ Likewise, sports teams have philosophies (overall approach) and playbooks (specific approaches for specific situations) – IT organizations usually don't
 - ▶ Have seen successful use of “team rules” in IT organizations
 - ▶ Cf. [Agile Manifesto](#) and [Twelve Principles of Agile Development](#)
 - ▶ Playbooks can include development heuristics and maxims, design patterns, language standards and guidelines

Performance: Offense = Development

- ▶ Adaptive (West Coast offense: fast moving, pass-heavy)
 - ▶ Business drivers require rapid development and close interaction with end users
 - ▶ Business drivers change on a rapid basis (due to competition)
 - ▶ Fast, tight development cycle is required.
- ▶ Predictive (East Coast offense: “three yards and a cloud of dust”)
 - ▶ Business drivers and technological considerations require a significant investment in analysis, architecture, and design up front
- ▶ Iterative (Balanced offense: even pass/run mix)
 - ▶ Up-front investment in analysis and architecture required due to the scale and complexity of the systems under development
 - ▶ But can't wait months or years for initial deployment

Performance: Defense = Quality Assurance

- ▶ Adaptive (Blitz defense)
 - ▶ Agile approach: test-before-code, pair-programming, strong built-in testing, etc.
 - ▶ Ensure zero defects before the code is ever released to higher-level integration and testing
- ▶ Adaptive/Predictive (Man-to-Man defense)
 - ▶ Integration, interface, and end-to-end testing, configuration management
 - ▶ Ensure that complete scenarios and uses cases can be carried out
- ▶ Predictive/Adaptive (Zone defense)
 - ▶ category-based testing, such as performance and stress testing, computational verification, scheduling testing, and regulatory testing, along with classic defect and change control management
 - ▶ ensure applications meet system and business requirements
- ▶ Predictive (Prevent defense)
 - ▶ compatibility/parallel testing, restart recovery testing, user acceptance testing, and production readiness testing; and performing release management
 - ▶ ensure that all stakeholders agree that it is both safe and desirable for the new system to go into production

Dealing with the Front Office

- Often inherent conflicts between business and IT goals
- Key Business goals
 - B1 — provide required and sufficient functionality to allow the firm to operate and compete on a level playing field
 - B2 — provide superior or unique functionality to allow the firm to beat its competition
 - B3 — provide efficiencies in productivity to allow the firm to free up funds for investment, expansion, and/or profits
- Key IT Goals
 - IT1 — maintain or grow its existing systems (and staff) or their equivalent
 - IT2 — migrate off aging, obsolete, or defective technology
 - IT3 — keep the business side (including end users) happy, or at least off its collective back, while getting the funds necessary to accomplish IT1 and IT2
- Essential to call out and understand these goals when negotiating between business and IT

It's Not Just One Game – It's a Season

- ▶ Organizations too often take a very short-term view
 - ▶ Focus solely on the (next) release of a given software project/product
 - ▶ Too often will not care if they injure or drive away key players in the process
 - ▶ Short-term choices for “success” can lead to long-term failure for the team and the organization
- ▶ Similarly, you need to focus on retaining your best people
 - ▶ Appropriate reviews and raises
 - ▶ Offer benefits that keep them happy and loyal
 - ▶ Excellent tools and equipment
 - ▶ Paid attendance at seminars, conferences, training
 - ▶ Book budget
 - ▶ Side projects exploring new technologies and methodologies