CS 428 – Webster readings #3

Fall 2018

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"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