sustainable speed is king

- Jodi Moran
  - zero to 10 million daily users in four weeks
  - CTO plumbee
    - social casino games
    - dev started october 2011 with 3 devs
  - mass market web entertainment for more than 8 years
  - all about the big picture
  - working on the sims social
    - 65 millions month users
    - 1To data
- what is sustainable speed
  - end to end time for each change
  - sustainability : maintaining speed over long time periods
- how
  - iterate
  - automate
  - commodity tech
    - languages
      - larger dev communities
      - open source components
      - aid and encourage componentization and reuse
      - ex : Java, javascript, actionscript
    - use third party services
      - maintain business focus
      - low opportunity cost
      - world class features
  - testing
  - isolate changes
    - high risk part on different releases
    - configuration and code different releases
  - launch minimal
  - virtualized infrastructure with AmazonWS
    - flexible and agile
    - small operation team
    - forces good software practice
    - advanced features
  - analyse and improve
    - collect user data
      - never too much data
      - store forever
      - through events
    - collect system data
    - report and monitor both user and system metrics
    - elastic map/reduce aggregation
    - Hive on EMR
  - SOA is object programming on distributed architecture
  - split testing
    - experiments to see how change affect users
    - assign random users to versions
  - match architecture and organization
  - prepare for technical debt
    - too much slows down
    - not possible to avoid
    - keep it under control
    - take it on when needed
- case study
  - case of
    - isolation
    - automation
  - games have a lot of configuration
  - content tools generally end at build time
  - same tool to deploy in dev/prod
  - content editing tool : gg spreadsheet
- a social game team
  - business product mgmt
  - art design
  - markt community
  - engeneering
  - automated infra
  - data analysis
- references
  - alberto savoia's keynote at GTAC 2011
    - test is dead
      - load test is dead
        - good load test is dead
        - what for ?
          - predict capacity ?
          - predict capacity for new feature ?
        - with cloud it scales
          - with data analysis you point the bottlenecks
          - deliver corrections quickly
      - operations is dead
        - all engineers need mission critical mentality
        - all engineers have access to production
    - testing less is less risky
    - the risk is to not do the functionality that the user wants
- social games
  - free to play on FB
  - highly interractive
  - cost per user matter
  - can grow very quickly
  - microtransactions
- why it is important
  - responsiveness
    - changing competition
    - changing pf (FB)
  - returns are greater
  - inverstment are less
- be agile
  - framework for
    - focus on principles not practices
    - incremental delivery
    - reflecting on process
- create a high speed culture
  - glue code is beautiful
  - code is a liability
  - embrace heterogeneity
  - there's no big picture
  - hire best people
  - give them easy access to information
  - tests & ops: cf Alberto Savoya
  - get them passionate
- another case study
  - data access patterns
    - persistence
    - data cached on client side
    - high ratio of writes to reads
  - micro view
    - k/v store
    - key userid
    - serialized to binary with google protocol buffer
    - innoDB/{userid, valueid, value} tuples
    - transactions with spring/aspectJ
  - macro view
    - sharding
    - shards managed with custom library
  - results
    - fast access for use cases
    - easy to understand
    - easy monitoring & tuning (mysql)
    - easy backupds
    - all with just few man/week effort