How we Built an Election Report-casting App at Quanteq Technology Services

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We’ll be talking about…

1. Work Context.
2. Software Development Methodology.
4. Convincing Management to go Agile.
5. Actually Going Agile.
6. Technology Stack.
7. Lessons Learnt.
Work Context

Abuja, Nigeria, West Africa

An IT Consulting firm
(IT Advisory, Systems Integration, Training, Project Management)

Public sector

4 people

80 people
Research and Systems Development Group

- Systems Integration.
- Custom software development.
- 17 Team members
  - Software architect
  - Business Analysts
  - Database developers/administrators
  - Front-end developers
  - Technical writers
How we’ve always done it

- Painful experiences on projects
  - With clients;
  - Between team members
- Permission before things can change

Clients change their mind, always!
But
Our architecture/development process isn’t built to change… rapidly
Business Analyst

1.0 it must...
2.0 it must...
3.0 it should...
4.0 it must...
5.0 it must...

Software Architect

Front-end Developers

Could we change...

Database Developers

#oreillysacon

OREILLY
Software Architecture
Client

Business Logic

User Management
Assessment
Reporting

Database
“Wish I could jail break my team like an iPhone”

-- Changing of the Guards by Pusha T

177M Nigerians

36 States

6 Geo-Political Zones

115,000 polling units

http://data.worldbank.org/indicator/SP.POP.TOTL

#oreillysacon
Target Users

Registered voters: 68M
Access to Internet: 82M
Smart phone users: 13.1M

The challenge the team faced

- No experience building software for the general public.
- Never built a mobile app.
- How do we know what the requirements are?
- How do we know if people love the app and if we got it right (feedback)?
- How do we handle all the potential traffic we’ll get?
Convincing management

I offered to:
- Take Responsibility.
- Handle the pressure directly.
- Low risk project.
Go Agile!

The Team
- Cross-functional
- Shared architecture

Scrum Rituals
- Daily stand-ups
- Sprint reviews

Tools
- Sprint board

Flipping Company Culture
- Documentation
- Team had more control
- Reported more often
- Realistic task completion estimates
Architecture

MySql on Google Cloud SQL

REST API on Google AppEngine
- Auto-scaling
- Memcache

Mobile Applications:
- Android
- iOS

Polling Unit Data

User Reports
Screenshots
Lessons learnt with agile

- Cross-functional teams resolve problems faster.
- Adopting agile is easy, changing corporate culture isn’t.
- Team morale improves and so does their health.
- Collaboration is encouraged and therefore team members become more committed.
All we’ve talked about

1. Work Context.
2. Software Development Methodology.
4. Convincing Management to go Agile.
5. Actually Going Agile.
6. Technology Stack.
7. Lessons Learnt.
That's all Folks!
Links, references and licenses

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