ENABLING INNOVATION AND RESOURCE SHARING

COLLABORATIVE DEVELOPMENT TEAMS

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Context

- Independent Health Information Systems (HIS) strengthening projects working in silos with their own budget and resources
- Supporting DHIS2 implementation in:
  - Mali
  - Côte d’Ivoire
  - Guinea
  - Burundi
  - Senegal
  - Ethiopia
What problem was being addressed

- Shift from programmatic technical assistance to IT-based support revealed some gaps:
  - Duplication of efforts across projects and implementations
  - Same software needs across countries with some specificities
  - Limited software developers to deploy to countries from HQ
  - Local country and project-specific software developers available
  - No purposeful collection or sharing of best practices
What were the choices

• Additional developers
• External developers for short term assignments
• Expand skills of existing technical staff to include software development
• Establish cross-functional teams combining external developers with existing internal technical capacity
What was our solution

- Enable creativity and innovation in software development by establishing a virtual work environment
- Coordinate existing internal capacity to build decentralized cross-functional teams
- Build on intrinsic motivation of passionate staff across projects around the world to create software innovation teams
How we did it

- Ongoing support from a "champion" of the teams
- Teams set up to address a defined business challenge
- Team charter developed with performance results
- Established team boundaries of operations
- Designated a team leader responsible for making sure the team meets the requirements of the charter
- Clarified team roles, values, and expectations
- Selected collaboration tool to enable virtual interaction
Collaborative Working Platform

1. Creation of a virtual web-enabled collaborative working environment
   - Set up a cloud server
   - Used open source software (Unix-based platform, distributed version control - GIT, DHIS2)
   - Set up a DHIS2 sand box where developers can test new DHIS2-based application ideas
2. Creating virtual software innovation teams

- Virtual teams work collaboratively on key software development ideas (Decision support systems, Data visualization dashboards, DHIS2-based facility registry)
- Development team composed of staff from JSI countries and HQ developers
What is the continuum about?

• Collaborative effort of DHIS2 group within JSI

• Objectives:
  • Make sense of the mess in DHIS2 implementation contest
  • Define technical approach to best use DHIS2 in HIS strengthening activities
  • Outline technological approach to respond to specific needs of countries

• The two sides of the same coin:
  • Technical Assistance
  • Development & configuration
Continuum domains

- Advocacy for investment
  - **Assist**: Advocacy/marketing
  - **Tech**: demo instances

- Stakeholder engagement
  - **Assist**: stakeholder / donors coordination
  - **Tech**: Assess country readiness for IT solutions

- Planning for DHIS2 rollout
  - **Assist**: Curriculum dev / planning
  - **Tech**: Infrastructure deployment / DHIS2 customization

- Business process analysis & requirements
  - **Assist**: information workflow / Business process def.
  - **Tech**: Innovative DHIS2 base app / MFL/MPI …
• DHIS2 configuration
  • **Assist:** understanding & mapping information needs
  • **Tech:** digitalization of info. flow/interoperability

• Build local DHIS2 capacity
  • **Assist:** DQA, data visualization, DHIS2 trainings
  • **Tech:** innovative training environment

• Promote data use
  • **Assist:** Data triangulation/analysis
  • **Tech:** Custom DHIS2 dashboards / Visualization apps

• Evaluating success
  • **Assist:** Sharing learning & best practices
  • **Tech:** Data warehousing
What are the benefits?

- Better respond to project-specific software development needs
- Version control and edit history
- Multiple developers can make changes; each change can be attributed to a specific developer
- A global reusable approach across countries allows contextualization by local projects; changes can be rolled back into the master project
- Improved virtual work environment nurturing creativity and innovation
Progress to date

• Data visualization dashboard in Rwanda (completed)
• Facility registry application for Guinea, Mali and Côte d’Ivoire (Under development)
• Decision Support System (in design)
• Several staff have their own software project ideas
• *All products are based on DHIS2
Thank You