



Improve Patient Care.
Maximize Business Results.

Implementing CMMI in a Virtual Development Organization

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Development

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MedPlus

- Customer facing software division of Quest Diagnostics Incorporated.
 - > Hospital / IDN
 - > HIE / Government
 - > Physician Office
- Quest Diagnostics is the world's largest chain of clinical diagnostic laboratories.
 - > Grown by acquisition
 - > Disparate systems and data centers
 - > Greater than a half million specimens per day

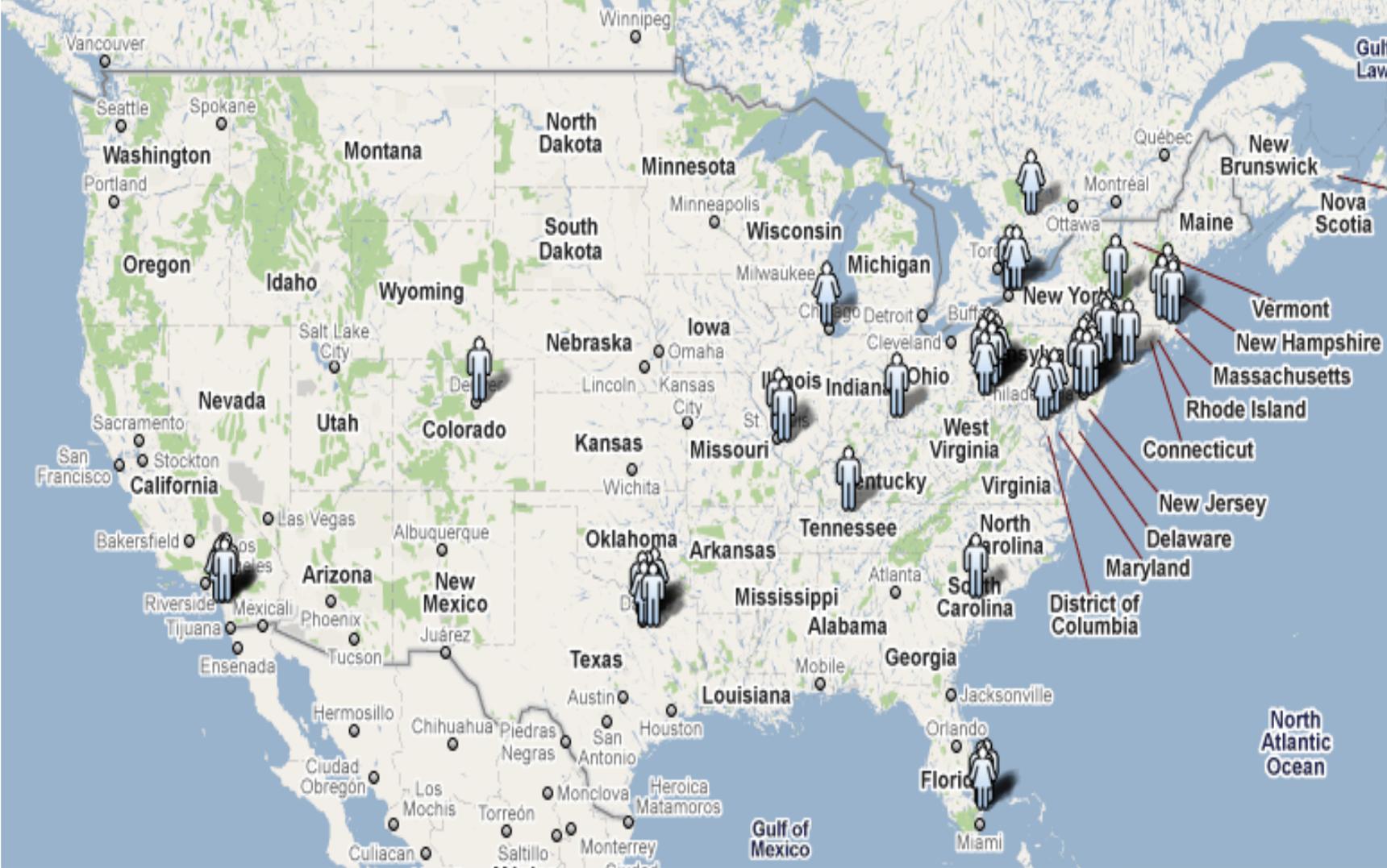
Care 360 Lab Orders and Results

- Originally developed in 2000
- >60 % percent of Quest Diagnostics orders pass through Care 360 LOR
 - > 300,000 per day
- 990,000 registered users
- 44,000 simultaneous peak users per day
- 42,000,000,000 unique results
- 19 TB of data
- Six Sigma up time
- Every specimen represents a human life
- Awarded United States Patent #7,567,913

Diagnostics Services Group

- Extremely virtual team
- 45 Developers, requirements analysts, QA analysts, support analysts, PM's and resource managers in 16 locations
- Modified waterfall SDLC
- 4 releases per year
- Six Sigma trained
 - > 2 Black Belts, >10 Green Belts
- Daily all hands calls
- Heavy use of instant messaging and smaller conference calls.
- High employee satisfaction
- Function points analysis showing consistently high productivity

LOR Team Geographically



Why CMMI?

- Low CMMI penetration in HealthCare IT
 - > Not a necessity for sales in our market space
- Create a more predictable process
 - > Make post release week feel like any other week
- Improve quality where possible
- Align to customer goals
- Maintain autonomy
 - > Team structure and geography unique to our organization

How did we get to Level 5?

- Management involvement
 - > Training
- Leveraged Six Sigma training and culture
 - > Access to Master Black Belts
- Stretch to achieve a level then refine those processes while pushing to achieve the next level.
 - > SEPG
 - > Obtain practitioner feedback and refine
 - > Perfect is the enemy of good for initial processes
- Keep focus on the reasons for process improvement
- Tap into innovative spirit
 - > Particularly at the High Maturity levels

Results

- Assessed at CMMI Level 2 - August 2005
- Assessed at CMMI Level 3 – July 2008
- Assessed at CMMI Level 5 – June 2010
- Acknowledged process leaders in our organization and company
- Increased visibility into status of processes during development phases and increased understanding of process capability yielding increased confidence in final product
- Increased visibility into linkage between micro activity and fulfillment of customer goals

QPPO Dashboard.

Browser: https://clarity.qdx.com/niku/app?action=dms.viewFile&fileId=11451058&fileName=CMMI Dashboard 20 - Windows Internet Explorer pro

Address Bar: https://clarity.qdx.com/niku/app?action=dms.viewFile&fileId=11451058&fileName=CMMI Dashboard 2011

File Edit View Insert Format Tools Data Go To Favorites Help

★ Favorites ☆

Address Bar: https://clarity.qdx.com/niku/app?action=dms.viewFile...

Page Safety Tools

| E35 | | LO&R Dashboard | | | | | v2010.1 | v2010.2 | v2010 |
|--------------|-----------------------------|---|--------|----------------------------------|---|--------|---------|---------|-------|
| Category | Component | Baseline ID | Metric | | | | | | |
| Quality | Improve Product Quality | Reduce Number of Defects Detected | ST01 | Reduce System Test Defects | | | | | |
| | | Reduce Rework on System Test | ST06 | Reduce Rejected Bug Fixes | | | | | |
| | | Improve Quality of Software in Test Phase | QI | Implement Quality Indicator Tool | 54.9 | 85.0 | | | |
| | Increase Defect Detection | Defect Yield | ST11 | # of Defects per CTQ | | | | | |
| Productivity | Improve Estimation Accuracy | Improve Planning Estimates from Historical Data | LOEREP | REP vs LOE Estimates | | | | | |
| | | | PP01 | Estimated Time vs Actual Time | | | | | |
| | Improve Productivity | Improve Planning to Support Portfolio Changes | | DSCUTFIX | # of Days for Design, CUT, ST Bug Fixes | | | | |
| | | | | FIX01 | Defect Fix Productivity by 2% | | | | |
| | | | | ST02 | Execution Efficiency | | | | |
| | | | | CUT01 | # of Days for CUT | | | | |
| | | Number Green | | Number Green | 4 | 6 | | | |
| | | Percent Green | | Percent Green | 50.0% | 75.0% | | | |
| | | Number Yellow | | Number Yellow | 3 | 2 | | | |
| | | Percent Yellow | | Percent Yellow | 37.5% | 25.0% | | | |
| | | Number Red | | Number Red | 1 | 0 | | | |
| | | Percent Red | | Percent Red | 12.5% | 0.0% | | | |
| | | | | | 100.0% | 100.0% | | | |
| LEGEND: | | | | | | | | | |
| Green | | meeting target or better | | | | | | | |
| Yellow | | between baseline and target | | | | | | | |
| Red | | below baseline | | | | | | | |

Navigation: Summary / PP01 / LOEREP / FIX01 / CUT01 / DSCUTFIX / ST01 / ST02 / ST06 / ST11 / QI / Color Chart /

Unknown Zone

Questions?

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