I Have a Knowledge Management Tool, Now What

Stephan Blasilli from EDP Renewables North America LLC

Houston, 2nd of May 2013

One of the largest Renewable Energy Companies

29 Wind Farms in 11 States generating over 3,800 Megawatt powering over 1M American Homes

Industry Realities

During the first quarter of 2013, renewable energy accounted for 82% of new energy capacity in the US

- Energy source mostly in remote areas
- Smaller scale than conventional energy assets
- Rapid improvements in technology
- Finding personnel with the technical skill set
- Energy source is intermittent (not continuously available)
- Increasingly complex regulatory requirements

Company Challenges

We faced 2 years ago

- No standard for prioritization of performance issues (what's most critical to work on right now?)
- Geographically dispersed portfolio
- Distance between sites and support functions makes constant knowledge flow difficult
- No standard or tool for storing institutional knowledge

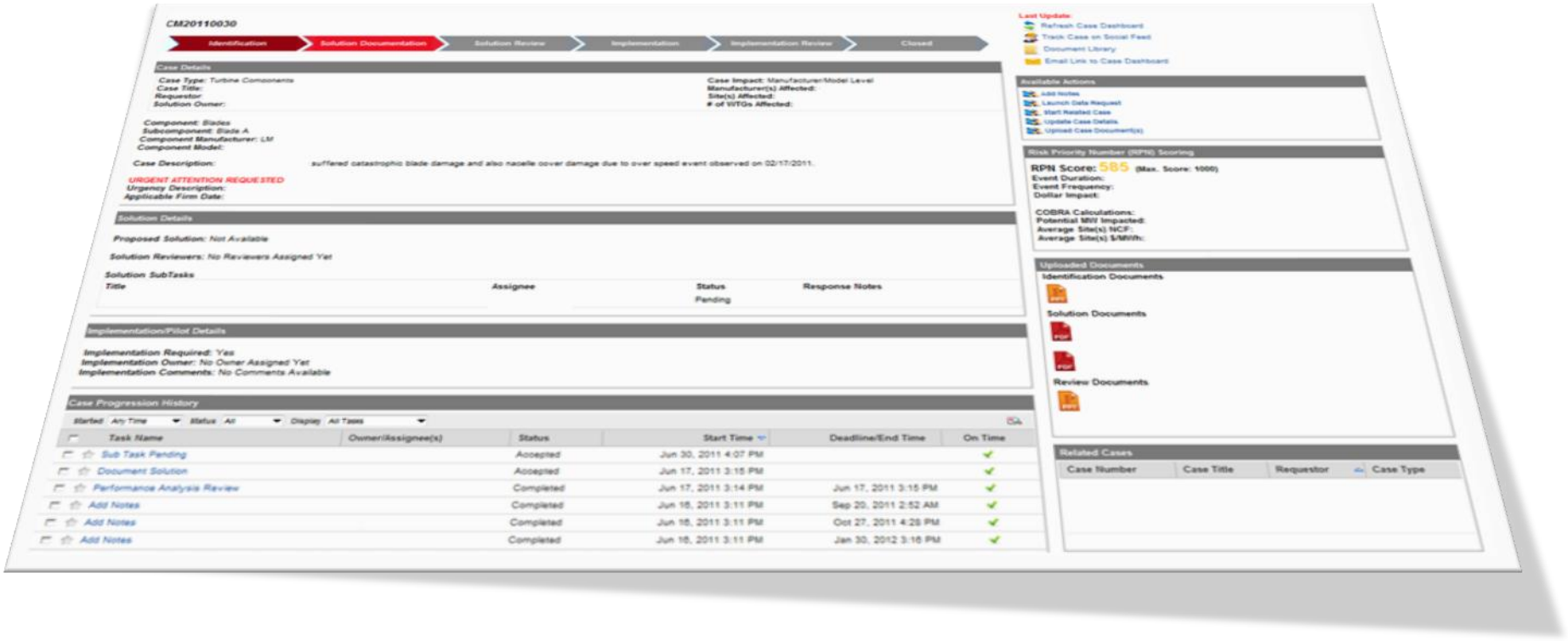
EDPR built COBRA (short form of Collaboration) to manage issue process and capture knowledge

The COBRA Case Management System

Process

The COBRA Case Management System

Knowledge base



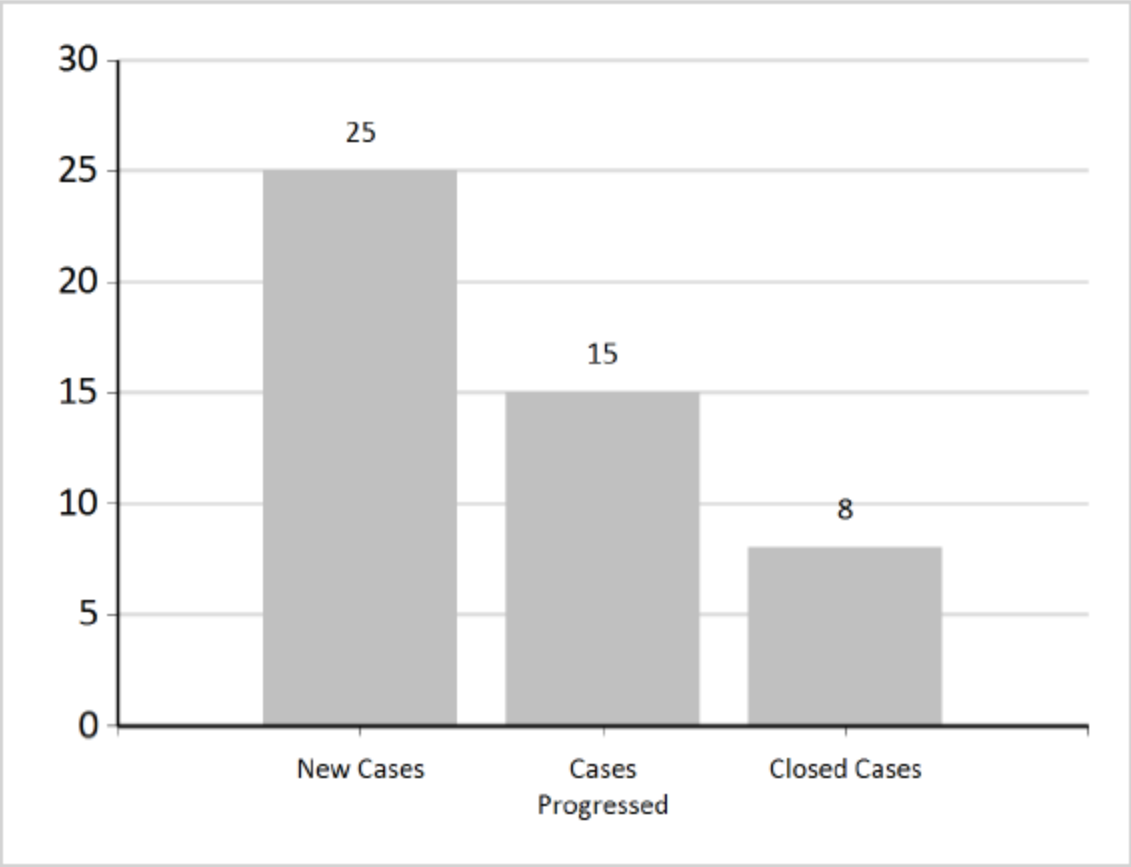
COBRA has already shown Value

Searchable knowledge base with detailed issue solutions, including context for decision making

Over $200M worth of issue solutions accessed over 6k times

Integration with Department Goals and KPIs

Progress since last meeting



Replacing Email with Social Media

Moving towards goal of reducing email issue tracking and email document sharing

McKinsey&Company

JANUARY 2013

ORGANIZATION PRACTICE

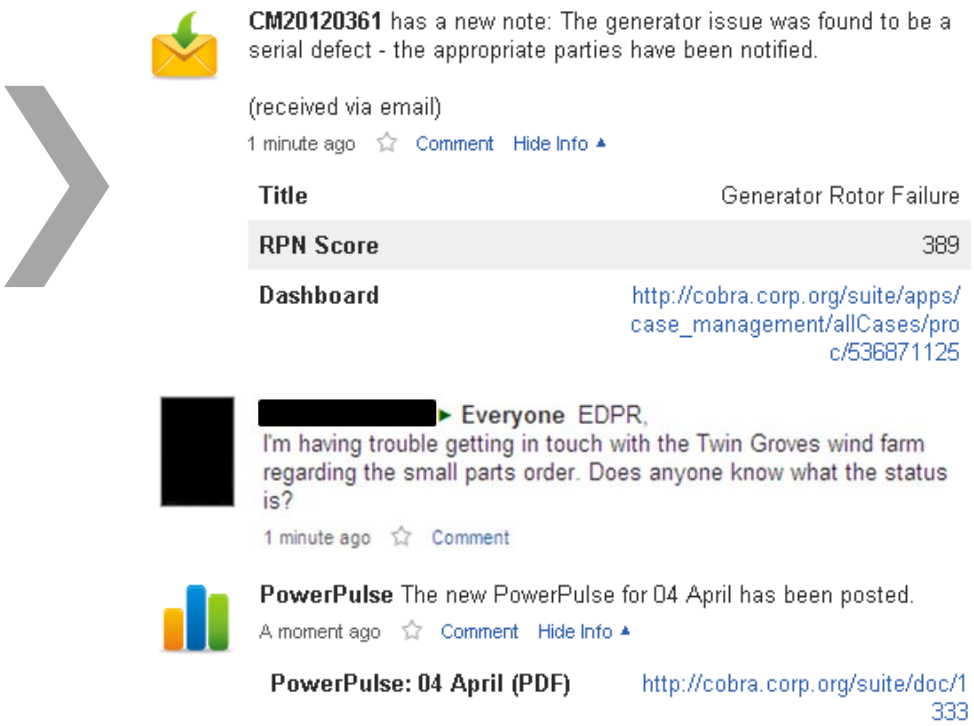
Making internal collaboration work: An interview with Don Tapscott

The author and strategist describes why effective knowledge management within enterprises requires replacing e-mail with social media.

Source: McKinsey & Company

Replacing Email with Social Media

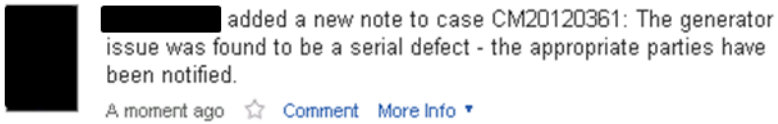
Email integration



Replacing Email with Social Media

Notes

- Notes primarily used a medium for case updates
  - 3 – 4 notes per active case



Replacing Email with Social Media

Knowledge engine automatically searches for similar cases to new entries

COBRA is checking for duplicate cases...

COBRA uses keywords from the Title entered to find potential duplicates. Please review the cases shown below to ensure that your case is not a duplicate.

Existing COBRA Cases

Case	Title	Case Type	Current Stage	RPN
CM20110219	Conduct Test of Turbine Pitch Optimization (TPO) Software	Turbine Control Software	Solution Documentation	63
CM20110194	BOP system check prior to over rating turbines	Turbine Control Software	Solution Review	75
CM20110188	Turbines Blown Line Fuses at During Grid Events	Turbine Components	Solution Documentation	295
CM20110139	Turbine Temp reduce power and gear oil level low stop	Faults	Solution Documentation	106
CM20110106	Develop system to track and take action on turbine warnings	Turbine Control Software	Closed	132
CM20110086	Pitch Manual & Turbine Manual	Faults	Solution Documentation	537
CM20120044	Power Curves on lower Efficient Turbines	Turbine Control Software	Solution Documentation	78

Replacing Email with Social Media

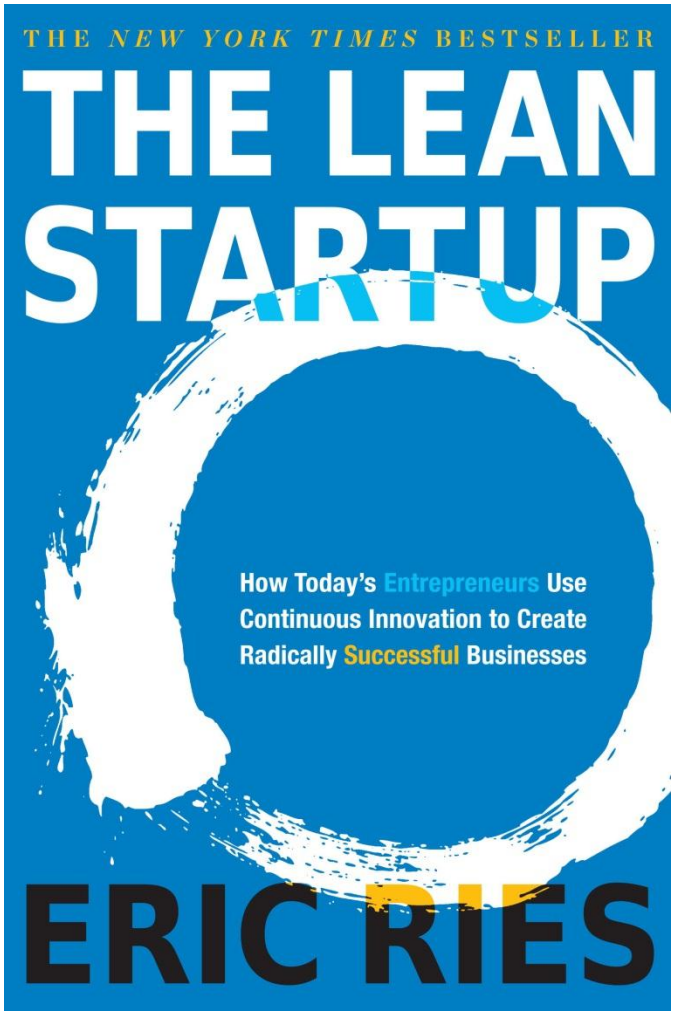
Transparency

Replacing Email with Social Media

Mobile

Applying LEAN techniques

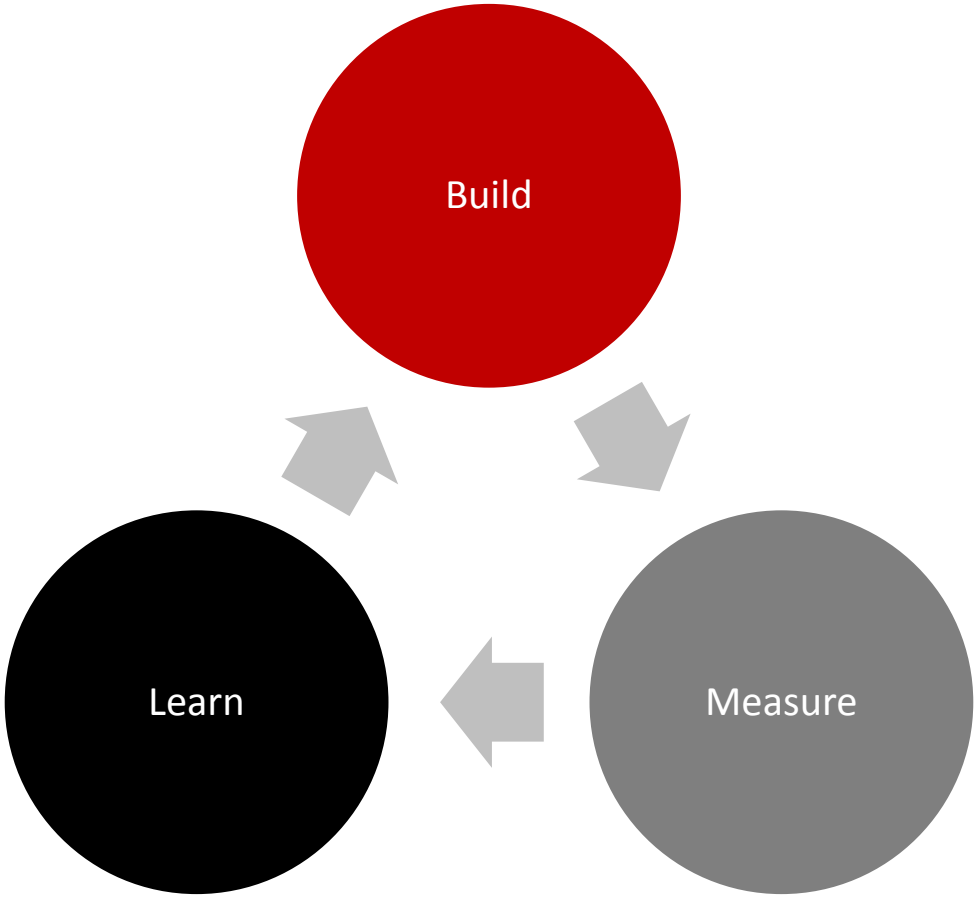
Initial COBRA development took ≈3 months, future updates and extensions must be quicker



Source: The Lean Startup

Applying LEAN techniques

Being effective with minimal resources

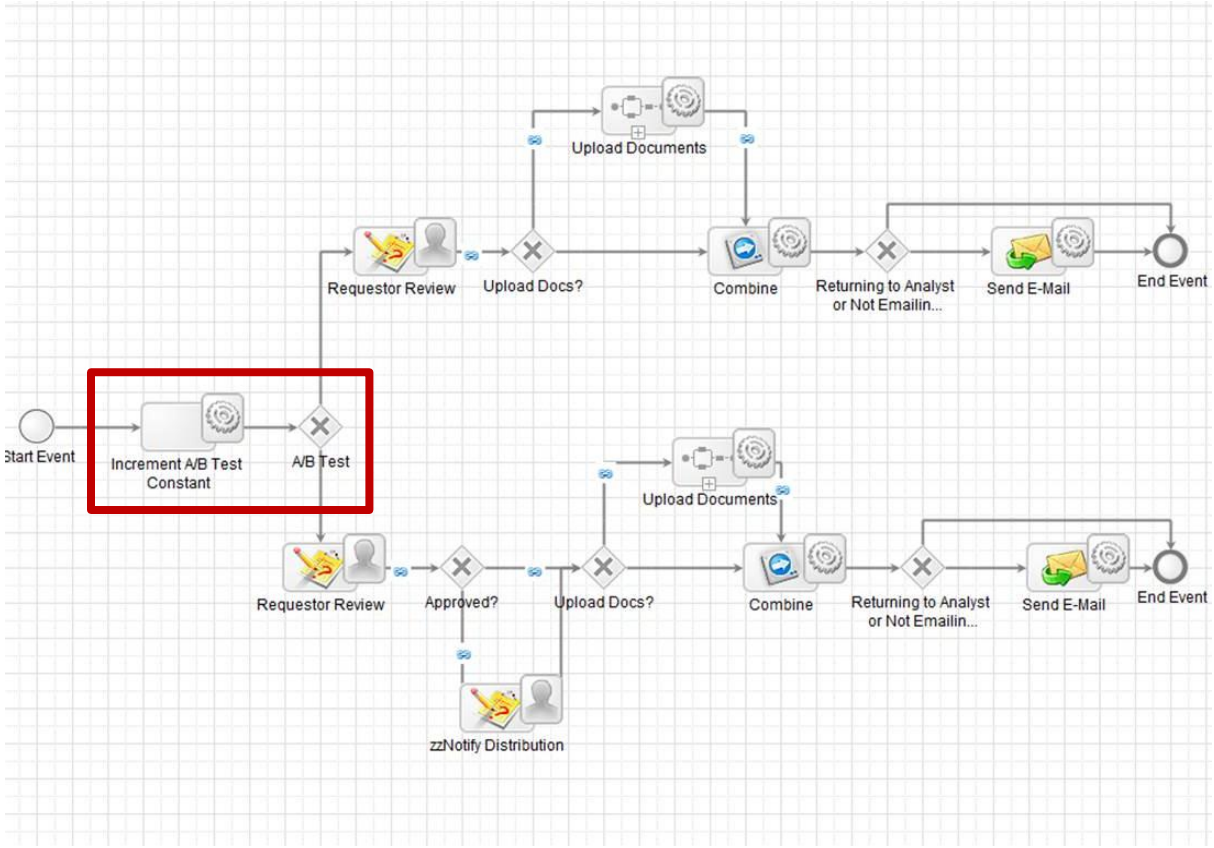


Applying LEAN techniques

Creating a minimum viable product

Applying LEAN techniques

A/B tests



Applying LEAN techniques

UX design

Source: Apple

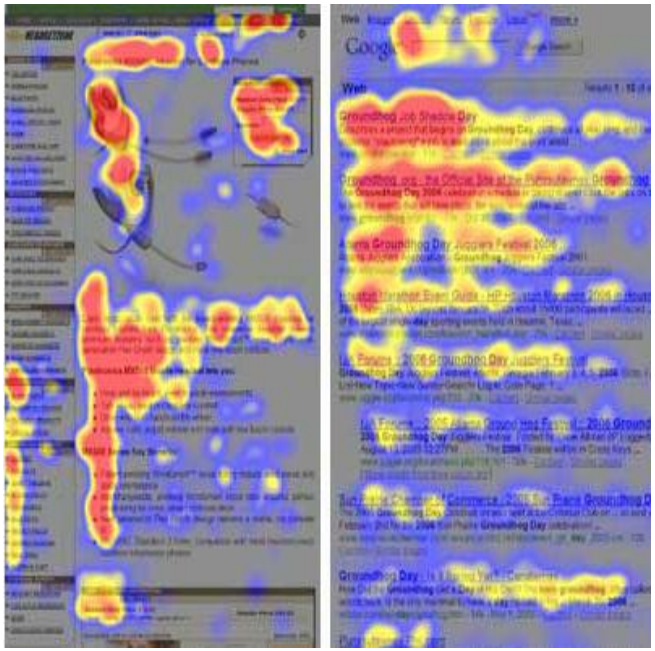
Applying LEAN techniques

Using design principles to improve UX

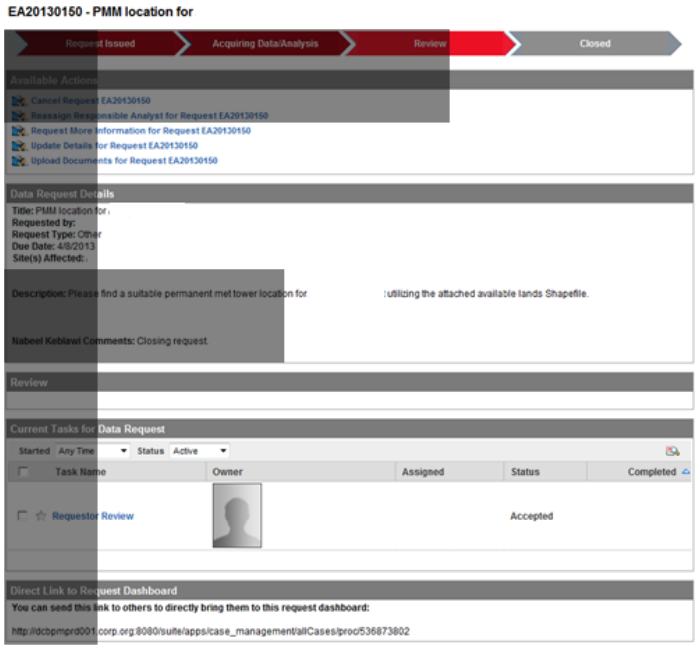
Source: Domestic

Applying LEAN techniques

The F-shaped pattern

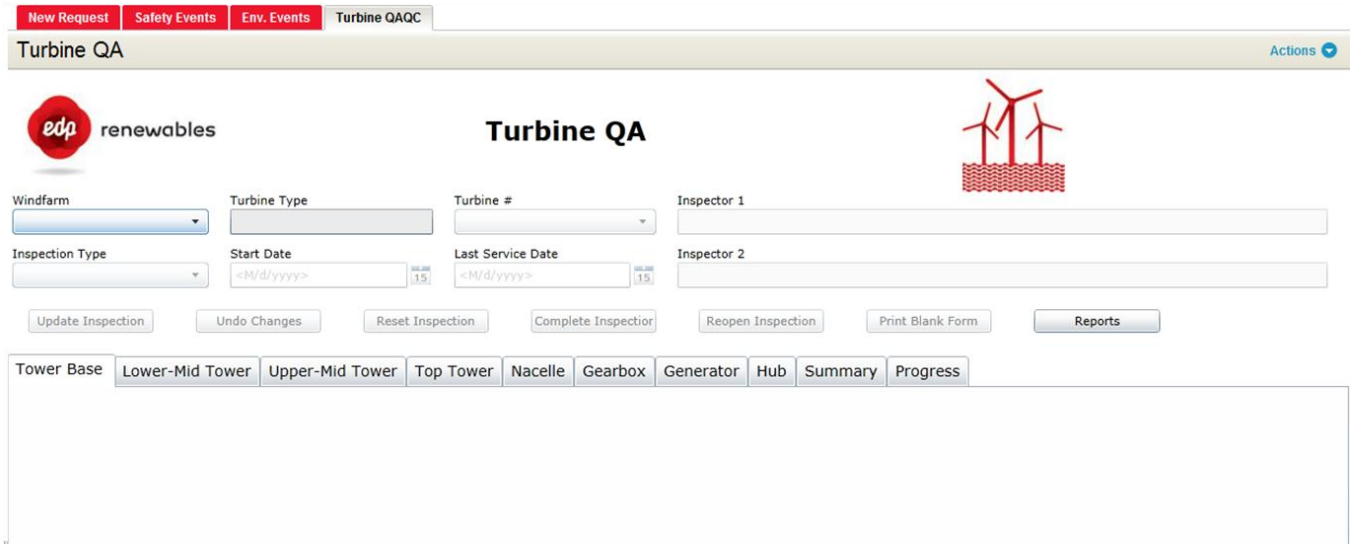


Source: Nielson Norman Group



Applying LEAN techniques

Make it easy to stay



renewables

Applying LEAN techniques

Getting to the next step

Thank you for your submission

Please click on the button below to continue to the request dashboard, where you can check status and to see who is currently responsible for handling your request

Current Process Steps

Please note that the analyst responsible for performing your request can change based on resource availability. Check the request dashboard for the latest information. You will be emailed when the status of this request changes.

Current tasks for

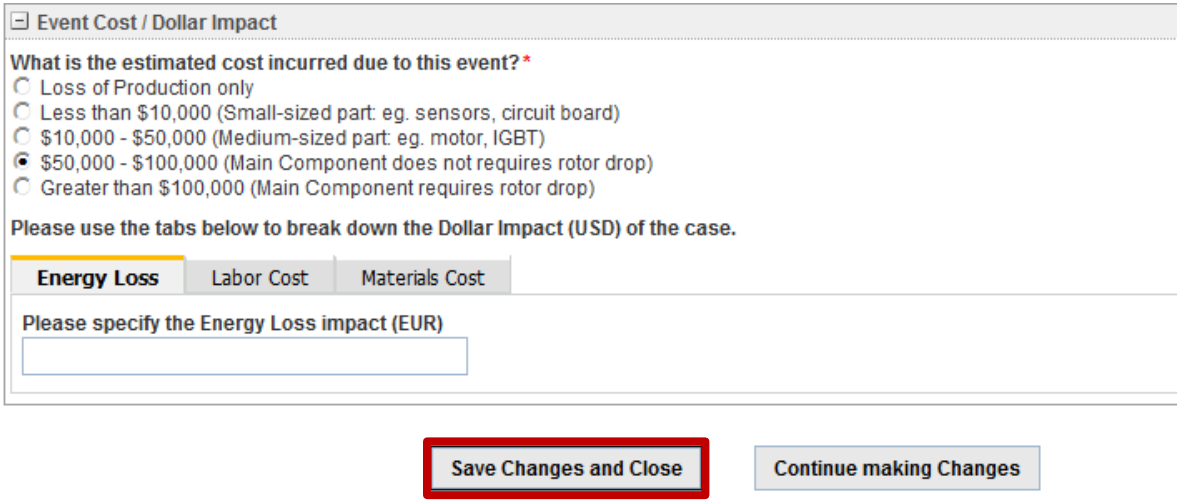
Request Title	Project Name	Type of Analysis	Requestor	Due Date
100 MW NCF Production Estimate fo		Production Estimate (NCF)		04/18/2013
- Bid		Production Estimate (NCF)		04/15/2013
NCF Report		Production Estimate (NCF)		04/10/2013
Suitability Analysis Package		Data Package		04/10/2013
Suitability Analysis and NCF Report		Production Estimate (NCF)		04/10/2013

Applying LEAN techniques

Make actions reversible

Applying LEAN techniques

Offer a way out



Lessons Learned

1. Ensure Knowledge Management is integrated into your everyday work
2. Keep solutions as intuitive for the end users as possible
3. Replace email with social media
4. Apply LEAN techniques

Thank You!

Blue Canyon Wind Farm, Lawton Oklahoma