ptc LIVEWORX

A NEW ERA IN PRODUCT LIFECYCLE INNOVATION

SESSION ID: CA1030C

SWITCHING TO ONSHAPE:
BUILDING A
BUSINESS CASE

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ABOUT

- Adrian Velazquez
  - 20 years experience in CAD industry (Designer, Admin, Manager)
  - 8 years using Onshape
  - Previous implementations/migrations of CAD, PLM & ERP Systems
  - Degree in Business and Organizational Management
  - Onshape Ambassador (& SW Champion)

- DEXCOM
  - Medical Device Industry
    - Continuous Glucose Monitoring Technology
  - ~8000 Employees worldwide

DEXCOM & ONSHAPE

- 2015 - Begun evaluation, access since Beta

- 2018 - First formal pilot in (single project, about 6 users)

- 2019 – One team transitioned to Onshape exclusively
  - Test equipment & fixture design

- 2021 – Developed and presented Business Case to leadership

- 2022 – Initiated transition/implementation (Project-based)

WHY A BUSINESS CASE?

- *"an explanation or set of reasons describing how a business decision will improve a business, product, etc., and how it will affect costs and profits and attract investments…"*
  - *Cambridge Dictionary*

- A formal, justified proposal to request resources and/or funding for a business-related initiative.

- Structure:
  - Administrative Details
  - Executive Summary
  - Problem
  - Idea/Solution
  - Benefits (extended)
  - Risks
  - Investment Details

PREPARATION

- Data driven justification

- Qualitative & Quantitative
  - Ticket or Support tracker
  - Surveys
  - System reports (PDM, PLM…)
  - Articles or industry data
  - User testimonials or Case Study

New item

Issue *
Enter value here

Product *
SOLIDWORKS
Main product related to the Request

Category *
Install

Date *
4/18/2023

Impact
Normal

Assigned To
Enter a name or email address

Requester
Enter a name or email address

Status
New

Solved
Remote/Email

Comments

Duration
Enter a number
Time involved in Resolving ticket

EXECUTIVE SUMMARY

Engineers and CAD Users experience difficulties collaborating and are constantly impacted by downtime while performing CAD activities. This has a direct impact to project timelines and quality. The proposed solution from *CAD Team* is to transition to PTC Onshape as the primary CAD package for The Company. The cloud application will improve access and traceability while collaborating, and at the same time eliminate the administrative overhead of maintaining the current system (SW + PDM).

Problem Statement + Solution

Initial investment could utilize the re-allocation of SolidWorks subscription ($XXX,XXX), $XX,XXX for temp worker(s) and/or tool to support migration, an estimated $XXX,XXX for learning curve of users. Migrating to Onshape would represent a $XXX,XXX annual gain in productivity, all this results in an IRR of XX% and NPV of $XXX,XXX at 8%.

ROI

The primary risk associated with the project is the time and cost of importing active Data to Onshape, we would mitigate this problem by budgeting for temp resource to support with this effort.

Risk mitigation

User onboarding is already active; the plan would be to initiate formal data migration in June 2023, prioritizing project "A" and "B" active design, to be completed in 6 months.
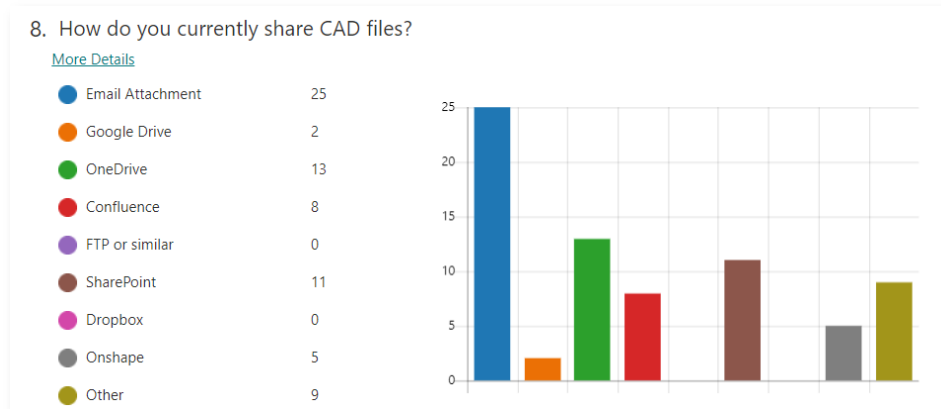
Action plan

PROBLEM

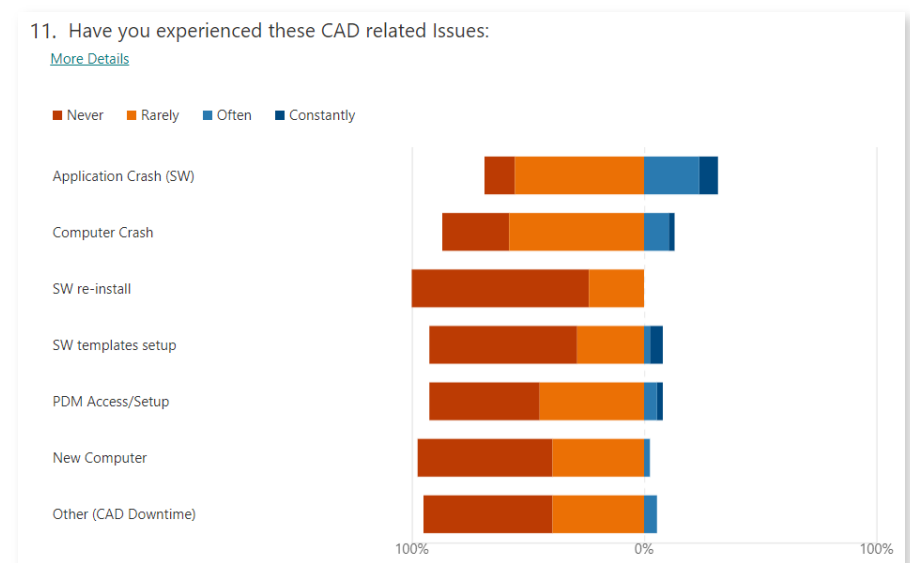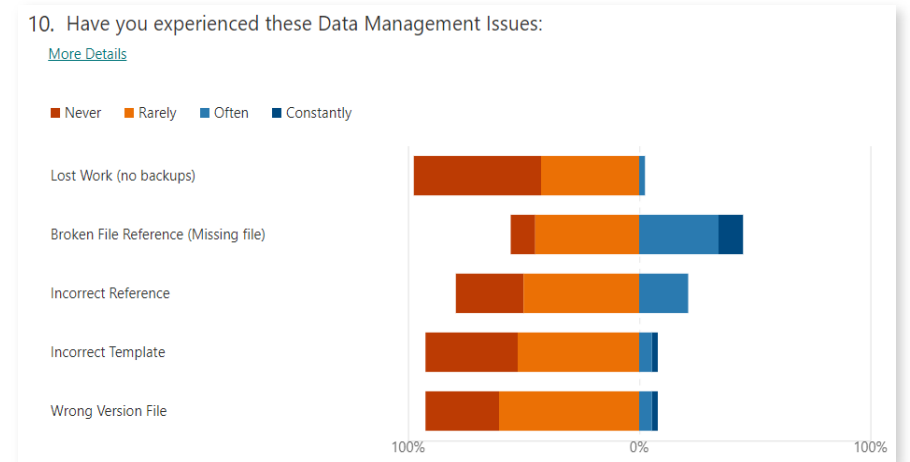Present current tool challenges and issues

PROBLEM

- Breakdown of "Current State" for existing System.

- Focus on "your" real environment problems, not Onshape's benefits.
  - Collaboration challenges:

• File version	• User-depend open/load
• Merging designs	• Folder access
• Change traceability	• Software version
• File format	• IP protection
• Copy proliferation	• Concurrent changes

- Productivity, Integrity, Downtime & Overhead

10. Have you experienced these Data Management Issues:

11. Have you experienced these CAD related Issues:

8. How do you currently share CAD files?

●	Email Attachment	25
●	Google Drive	2
●	OneDrive	13
●	Confluence	8
●	FTP or similar	0
●	SharePoint	11
●	Dropbox	0
●	Onshape	5
●	Other	9

PROBLEM

- CAD Support Tickets Dashboard
  - In MS PowerBI – connected to SharePoint List
  - Validates Survey impressions
    - Qualitative > Quantitative
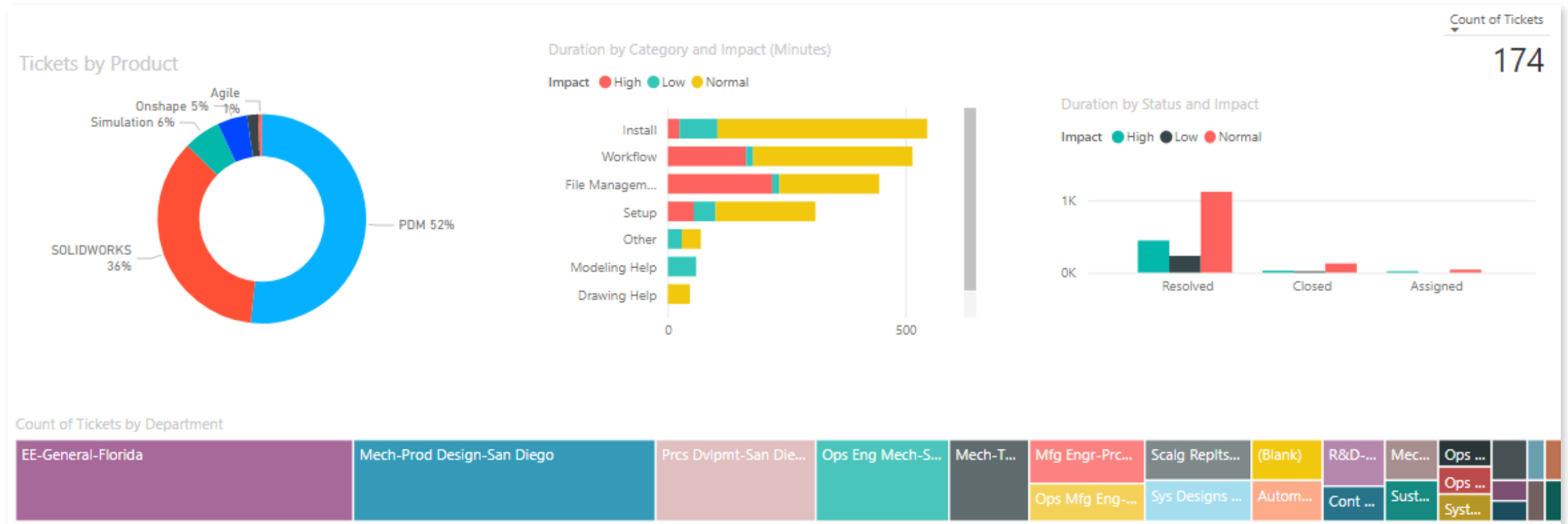
IDEA

The solution, how are you proposing to solve the "problem"

IDEA

onshape®

☐ Align specific capabilities and traits of Onshape that address the problems identified.

- **Collaboration**
  - ☐ Simple and secure access via URL link, easily revocable
  - ☐ Ability to easily invite/onboard external users
  - ☐ Built-In commenting and tagging for Design Review
  - ☐ Universal App Version (no compatibility problems)
  - ☐ Simple design branching and conceptualization

- **Data Management**
  - ☐ Immutable design history
  - ☐ Synchronous Development
  - ☐ Iterative Design
  - ☐ Comparative

- **Administration**
  - ☐ Engineers could perform CAD activities on a Mac or their preferred device.
  - ☐ Performance is consistent across all users, regardless of hardware specifications.
  - ☐ Deployment for new users only requires approval of Okta access.

IDEA

- Turn your "idea" into an initiative by adding a high-level plan
  - Implementation strategy
    - Project-based, team-based or bulk migration?
  - Resources and timelines
    - Migration tools (Monarch)?
    - Drafter or Technician type support?
      - Temp or full time?
    - Training plan: Onshape Learning Center and/or Custom

IDEA

- ## Make the decision easier for leadership

- ## A Decision Matrix
  - Clearly define categories and criteria for score

- ## Put some "Weight" into it
  - Multiplier that at relevance to the areas that are **more valuable** to your environment

- **Collaboration (2.5):** The main reason this initiative was started, is a key challenge for Eng teams. IP protection, accessibility and version control are current concerns.

- **Functionality (2):** Current design/modeling capabilities and performance.

- **IT/Infrastructure (1.5):** Architecture, system requirements, performance and stability.

- **Ecosystem (1.5):** State of full available suite of compatible/integrated apps.

- **Tool Outlook (2):** How does the roadmap for the product and parent company look?

- **Cost (1.5):** Overall cost of the CAD/PDM application, in relationship to industry/competition.

		Collaboration	Functionality	IT/Systems	Ecosystem	Outlook	Cost	
Multiplier		2.5	2	1.5	1.5	2	1.5	
SOLIDWORKS		2	5	1	5	2	3	18
		5	10	1.5	7.5	4	4.5	❌ 32.5
onshape		5	3	5	3	5	4	25
		12.5	6	7.5	4.5	10	6	✅ 46.5

BENEFITS

Beyond solving current problem

EXTENDED BENEFITS

- Compounded improvements, result in efficiency gains
  - Productivity financial value

- Showcase how Onshape will transform your environment
  - Highlight "unicorn" type features
    - Built-In Analytics
    - Limitless Design History
    - No-reseller
    - Direct support

CAD Activity Indicators:

- Design/Modeling
- Design collaboration
- Drafting
- Locating Data/Designs
- Hardware performance
- Import/Export
- App stability (crashing)

- Releasing designs
- Installations
- Setup/Configuration
- Support/Troubleshooting
- Updates/Maintenance

- **Efficiency gains by role:**

User Role	Number of Users	% of time in CAD	Efficiency gained	Average Salary	Savings in $
Technician	50	10%	10%	$60,000	$30,000
	200	20			$28.85
Engineer	80	15%	10%	$120,000	$144,000
	480	48			$57.69
Manager	20	5%	10%	$160,000	$16,000
	40	4			$76.92
	150				**$190,000**
CAD Admin	3	50%	90%	$120,000	$162,000
	60	54			$57.69
				Total Annual productivity value:	$352,000

RISK

A good proposal addresses impact

RISK

- Any solid proposal acknowledges risk and includes mitigation
  - Migration
    - Scope, time and effort
      - Active vs Legacy
  - Learning Curve
    - New Users vs Expert Users
    - Impact by role/function
  - External contributors and partners
    - Will they use Onshape?
  - App Portfolio
    - Extended capabilities of available apps, and plug-ins
      - Integrated vs standalone
  - Security
    - IT Security review
      - Data robustness
    - SSO capability

INVESTMENT

It's all about the bottom-line

INVESTMENT

- Factor the Return On Investment (ROI)
  - Net Present Value (NPV) is the standard
  - Internal Rate of Return (IRR) is also relevant

- Important numbers:
  - Current tool cost of licensing & subscription
  - Cost of learning curve impact
  - Cost of training time and course costs
  - Cost of Onshape subscription
  - Rate 8% for NPV (typical for IT projects)
  - Include productivity savings (gain)

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