

Emily – Mechanical Engineer



“Does this tool enable me to make more relevant and realistic design recommendations?”

Key Organizational Relationships





Titles

Optical Engineers, other Mechanical Engineers, system & electrical, manufacturing engineers (copy Optical)

Common reasons for interacting

- Fix problems and tweak design to accommodate other engineering and marketing inputs
- Status updates (on-time, on-budget)

Business Care Abouts

- (A) Build systems that are in specification

- (B) On-time, on-budget delivery

- (C) Determine mechanical spec to meet product level spec

- (D) Flexibility to enact changes quickly


Personal Care Abouts

- To make the optical designs into reality by designing a complete system
- To prepare mechanical components for manufacturing (create drawings)
- To understand the design requirements from all other disciplines required to create the system
- Being a valued design team member

Personal Challenges

- Optical engineers blaming them for design failures
- Not receiving credit but all the blame
- Working with STEP files, spreadsheets, text files and using other manual processes that require a lot of verbal communication but result in inaccurate or incomplete data
- Having to redesign when an error is found in a prototype
- People with partial view of design question the intent
- Management and timeline pressures

Stakeholder Purchase Benefits

- (A) Only solution in the industry that provides the ability to simulate the impact of mechanical components on optical performance in Mechanical Engineer's CAD tool of choice to ensure system specifications are met.
- (B) Uncovers opportunities to reduce cost by exposing optical tolerances and through simulation to find errors before building the physical prototype.
- (C) Ensures system fidelity through ability to load native optical design files in CAD software and maintain exact geometry to ensure mechanical spec meeting product level spec.
- (D) Realtime interactive capabilities to support updating simulations as errors are found or design requirement change.

Motivations

Downward pressure of meeting mgmt. expectations



Make workflow as easy as possible



Earn and retain credibility for their designs



Maintain ability to stay curious and be challenged



Patrick – Optical Engineer



“Does this tool provide me the features I need to support the application I am designing?”

Key Organizational Relationships

Titles

Optical Engineers, Mechanical Engineers, System Engineers, Management, Project Managers, R&D, Lab Tech, Manufacturing

Common reasons for interacting

- Break, fix, troubleshoot
- Design decisions, changes in specs, approvals
- Project reviews
- Hand-offs

Business Care Abouts

(A) Build systems that meet spec



(B) Evaluating concepts



(C) Improve processes



(D) On budget and on time



Personal Care Abouts

- To bring a PHD level mastery of the physics of light to an organization so the company is confident in business decisions
- Subject matter experts

Personal Challenges

- Misperceptions of how optical systems can support business needs
- Iteration issues between development paths and specification changes
- Productivity – too much to do, limited resources

Stakeholder Purchase Benefits

- (A) Provide in depth validation that your optical system continues to meet specifications as you move through the system design process design by using the same file type so that the optical data is retained (process improvements) (ZVP)
- (B) Provide a way to understand optical physics and determine if the results can be used to build a product (R&D process) (OS)
- (C) Reduce iterations and frustrations with cross departmental misunderstandings of your design by exposing the critical optical performance metrics to the mechanical engineers (ZVP)
- (D) Ensures products can be manufactured & delivered through tolerances and cost estimation capabilities (OS)

Motivations

High level of rarified skill set



Comfort of status quo



Bias for or against vendor offering



High level of emotional investment



Robert – Engineering Manager



“Will this solution bring a ROI in the team’s overall design process?”

Key Organizational Relationships

Titles

Executive Team, Business Stakeholders, Mid-Level Managers (peers), engineers, product management, finance

Common reasons for interacting

- Project status
- Issues, constraints
- Resources
- Holding team accountability
- (same as Patrick)
- Share best practices & educate on workflow

Business Care Abouts

(A) Build product within spec, budget & timeline



Hire, train and retain top talent



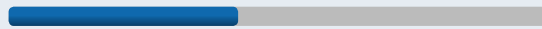
(B) Improve process and design cycles



(C) Pivot to new marketing specs



Compliant process adoption



(D) Innovate (if responsible for R&D)



Personal Care Abouts

- Respect budget and time
- Follow and transfer company strategy to the staff members
- Take on risk or avoid risk

Personal Challenges

- Pressure of timelines
- Resource constraints
- Broken workflow, lack of collaboration, repetitive processes
- Employees turnover, knowledge escaping
- Lack of innovation and competitiveness

Stakeholder Purchase Benefits

- (A) Utilize Zemax’s solution and industry best practices to quickly deliver products to market by eliminating inefficiencies in your workflow, catching errors early, and lowering your total cost of product.
- (B) Maintain the design fidelity and eliminate unnecessary design iterations throughout the entire cross-departmental design process with optical tolerancing and visibility of critical tolerances which improves manufacturing yields and cost margins.
- (C) React quickly to mid-stream changes during the design process by loading native optical geometry and updating improved optical designs into established mechanical assemblies.
- (D) Support innovation efforts by quickly determining product/design viability with product optimization capabilities for both optical and mechanical components (dynamic link, pass fail metrics, local and global optimization capabilities).

Motivations

Career progression



Process improvements to improve team performance



New technology / Innovation



Key player in delivering against company strategy



Provide management support to their team

