

Redefine your approach to problem management



Key insight:

Problem management should be more than fixing incident root causes. It should also focus on identifying and capturing opportunities for business improvement.

Questions addressed:

- How do we define and identify a problem?
- What is the problem manager's role?
- How can we effectively use ServiceNow to track and build transparency on problem management?

How to do it:

1. Adapt the problem definition to be more inclusive by including improvement opportunities

2. Focus the problem manager's role on building a culture of self-management

3. Configure ServiceNow to build transparency and drive collaboration

Profiled company name: Owens Illinois, Inc. (O-I)

Description: O-I is the world's leading glass container manufacturer with more than a century of experience crafting pure, sustainable, brand-building glass packaging for many of the world's best-known food and beverage brands.

Key figures for 2018: \$6.9B (USD) in revenue • 26,500 employees • 77 manufacturing plants • 23 countries

Experience with ServiceNow: In 2013, O-I implemented the Incident, Problem, Change, and Configuration Management (IPCC) modules after a whirlwind three-month implementation project. Over the next six years, O-I enhanced the existing IPCC processes and also built major hardware and software asset management processes in the tool, implemented Orchestration, and created hundreds of catalog items across IT, HR, and other departmental lines of service (automation and workflows).

Redefine your approach to problem management



Situation:

O-I had too many open problems, many of which aged significantly without consistent review or resolution. This complicated their ability to track and prioritize solutions to key business issues. Additionally, it was unclear when to convert an incident to a problem, creating potential delays of resolutions.

The challenge:

Teams didn't always prioritize problem resolution, which led to the acceptance of workarounds. Leadership had little or no visibility into existing problems, and there was no consistent process to identify, track, prioritize, and resolve known problems. There was also no standard process that investigated repetitive incidents or requests for improvement opportunities.



*"**It can be done**" is the quote of our Founder, Michael J. Owens.*

*I agree with him. O-I has revolutionized the glass industry by ingraining that spirit into our culture. How we do work today may not be how it's done tomorrow. **Challenge the status quo, even when it comes to your own processes.**"*

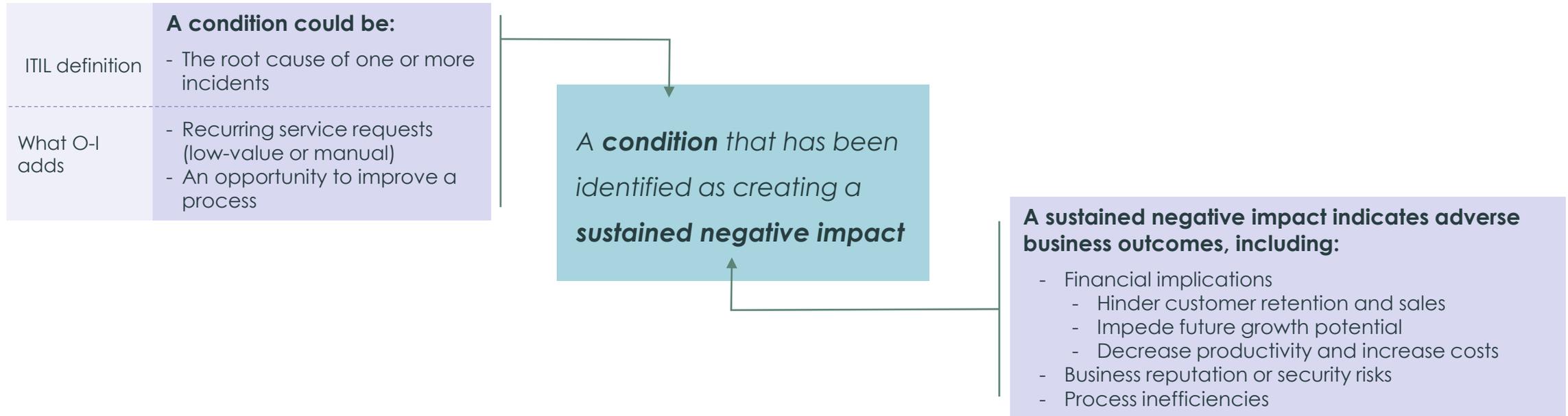
Adam Jackson
IT Problem Manager

Action 1. Change the problem definition to capture improvement opportunities



O-I changed how it defines problem management to capture continuous improvement opportunities. The new definition provides a yardstick—sustained negative impact—to guide prioritization.

O-I's definition of a problem



*"ITIL is a framework; it is a suggested way to work. **We adapted this framework to address our needs and bring the greatest value to O-I.**"*

Scott Mortemore

Director of IT Service Delivery – Manufacturing, Supply Chain, and Engineering Systems

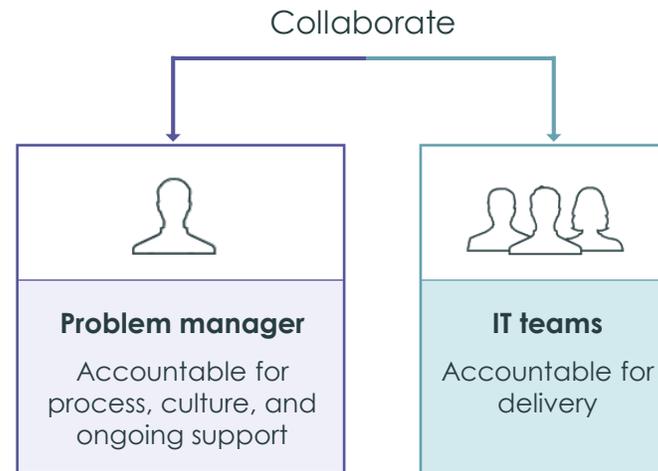
Action 2. Focus the problem manager's role on building culture



O-I holds the full-time problem manager responsible for building a culture of effective problem management across the organization and not for problem resolution.

The problem manager's and IT teams' accountabilities at O-I

- 1 Teach a common definition of a problem.**
Conduct training and working sessions to ensure team members are aligned with the common definition. Provide support when necessary.
- 2 Promote transparency.**
Track and report problem status and business impact consistently across stakeholders. This gives credibility to the process and IT team.
- 3 Model how teams should work together.**
Highlight successes and best practices, demonstrating the value and power of problem management.



- 1 Analyze problems and identify resolution tasks.**
The teams manage their problem queue and coordinate problem meetings. Tasks are assigned across teams and by teams as necessary.
- 2 Facilitate problem task resolution.**
With built-in transparency, teams can prioritize and collaborate to quickly complete tasks. All information is in one place.
- 3 Provide updates to assigned problem tasks.**
The owner of each problem task is accountable for making timely updates in the system to show progress.

"Teams take ownership and management of their problems. **That's what makes problem management work well for us.** Our problem manager provides deeper-level support and toolsets when needed."

Ray Case

IT Director – SAP Infrastructure and Enterprise Platforms

Action 3a. Configure ServiceNow to build transparency



O-I used the ServiceNow [email notification](#) feature as a status report for problems and added all relevant stakeholders (including senior leadership) in the [watch list](#) to ensure alignment and transparency.

The email notification ServiceNow is configured to send out as a problem status report at O-I

Number	PRB0045044	Opened	2018-03-18		
Priority	2 - High	Assigned to	James Andrews		
Watch list	Rodney Masney, Ray Ives, Scott Mason, Adam Jackson, James Andrews, Tara Elliott, Alan McCarthy, Darlene Rausch	State	Work in progress		
Short Description	Plant 43 Data Acquisition Issues				
Description	This is affecting all of the lines. It appears that one line goes down at 15:10 in no particular order. The acquisitions after the 15:10 do not load.				
Additional Comments					
2018-04-12 08:22:06 EDT - Tara Elliott (Additional comments) Updates to exclude select scans on manufacturing servers has been approved. The exclusions will be applied this week and the support teams will be notified when they are completed. Machines will be monitored once completed to verify fix.					
Workaround					
Data is still collected it's just not visible to the plant. This requires the manufacturing support team to log into the acquisition servers to provide necessary information.					
Problem Tasks					
Number	Short Description	State	Assigned To	Due Date	
PTASK0011482	Run performance scans on all Plant 43 servers	Open	Tara Elliott	2018-04-19 17:00:00 EDT	
PTASK0011484	Evaluate the need for additional database indices	Work in progress	James Andrews	2018-04-25 12:00:00 EDT	

The email notification has been reformatted to highlight who is on the watch list. It includes both internal IT and business customers.

The description highlights the **negative business impact**.

The problem tasks in the report highlight the remaining work to be completed.

Future enhancements

- Inclusion of incident count
- Tracking for PTASK due date
- Formatting updates to simplify appearance

“These status reports are taken seriously as they go to stakeholders inside and outside of IT, including third-party partners we rely upon. They also drive visibility into the work being performed and hold teams accountable.”

Rod Masney
Chief Information Officer

Action 3b. Configure ServiceNow to promote team coordination



O-I configured an additional fifth level, available out of the box, to track and manage all problems. Along with providing a prioritization scale, the levels influenced teams' behavior and informed a resolution approach.

O-I's five-point scale to track and prioritize problem resolution

Priority levels	Definition (based on degree of sustained negative impact)	Teams' behavior and approach
Level 1: Critical	Problems have a significant impact because they directly affect business viability and financials (e.g., they're an active security threat).	Teams meet every 90 minutes and provide continual updates. Status is reported daily, at minimum, until the problem is resolved or impact and priority are reduced.
Level 2: High	Problems have a high impact because they limit the business but don't prevent it from functioning.	Teams meet weekly and ensure the problem is updated. Status is reported weekly.
Level 3: Moderate	Problems have a moderate impact because they only affect certain business functions and a limited number of users.	Teams meet as necessary to update the problem. Status is reported as needed.
Level 4: Low	Problems have a low impact because they impact a more limited number of users and business functions.	Teams meet as necessary to update the problem. Status is reported as needed.
Level 5: Best effort	Problems have some impact but are not urgent (e.g., they're improving an existing process).	There is no SLA assigned to these problems, and teams work on them based on their capacity.

Teams' behavior and approach to problem resolution are informed by:

- Product documentation, periodically revised to maintain clarity
- Guidance from the problem manager, who meets with the team regularly

Results of problem management at O-I



O-I has created an approach so problems are not seen as distractions to work but are prioritized to realize business outcomes faster.

1. Increased team ownership



Percentage of problems teams resolved on their own in 2018 (out of 150 problems closed)

2. Faster problem resolution



Problems opened and closed in 2018 (total 75)

3. Increased visibility and resolution of improvement opportunities tracked as problems

At least 3–4% of the active problem portfolio focused on process improvement, including improvements to disaster recovery processes, application packaging processes, and the problem management process itself.

4. Strong relationships

IT built strong relationships with business units and third-party partners through increased transparency in problem management processes and interaction.

"We would not be where we are at today without problem management. When the management team for a critical system was faced with protracted issues, a problem manager was assigned. From there, we quickly gained traction by escalating priority and taking a more systematic, data-driven approach. This led us to the root cause of the issue and ultimately a better relationship with the vendor."

Alan Schroeder

Project Manager, Global Product Quality

Additional information

How does O-I identify problems?



O-I's IT teams listen for and identify problems wherever and whenever they occur. They do not presume to know the answers—instead they keep an open mind to ensure possible solutions are not blocked.

O-I identifies problems in these ways:

- Any O-I employee can raise a problem for IT teams to review.
- Any IT employee can create the problem for a user, their team, or the department.
- IT teams create a problem when they see multiple interlinked incidents.
- The IT service desk creates problems when they come across recurring issues or improvement opportunities (e.g., recurring service requests).
- Monthly calls with locations in North America are taking place (~20 manufacturing plants currently) with future expansion to other regions.
- O-I is starting to conduct regular meetings with the business to develop deeper integrations with IT.

How do problems differ from incidents at O-I?

- Incidents generally fulfill the user's needs as quickly as possible.
- Problems seek to:
 - Ensure the root causes of issues are corrected
 - Understand why the call was necessary in the first place
 - Coordinate multiple teams during resolution if needed

What is the ideal background of a problem manager candidate?



When it comes to finding a problem manager, O-I looks for strong collaboration and process skills along with a desire for continuous improvement. In addition, O-I finds that understanding how to ask questions properly is more valuable than having a deep technical knowledge of an area.

At O-I, a problem manager should have:

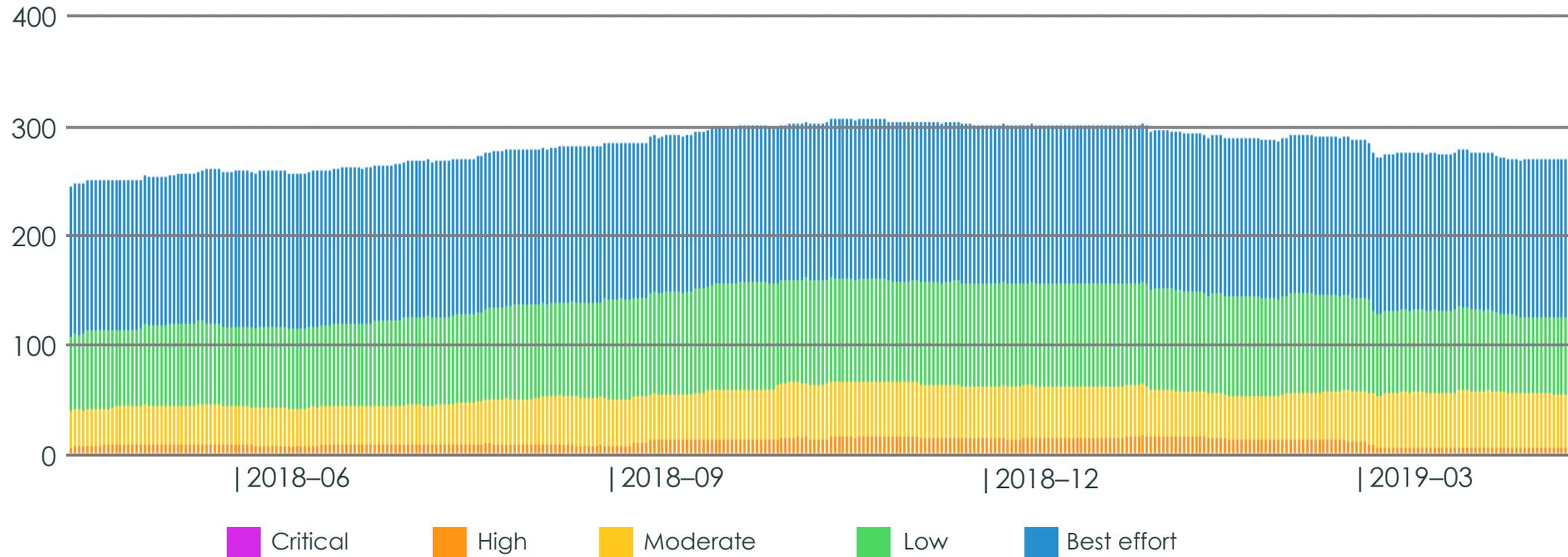
- Excellent interpersonal, consultative, and communications skills
- A proven ability to:
 - Coordinate and lead diverse, multi-departmental resolution teams
 - Develop and sustain sound working relationships
 - Understand the impact of possible resolutions
 - Prioritize problems with business needs
 - Coach and develop others
- Experience with:
 - Process improvement (Lean, Six Sigma, others)
 - Conflict resolution

How do they report on problems?



O-I uses the ServiceNow [Performance Analytics](#) module to report on problem data across all levels. The snapshots enable O-I to conduct deeper analysis and to trend problems by team, configuration item, and other areas.

Review of known IT problems in the last year (as of 04-23-2019)



Where there any prerequisites that drove success at O-I?



Process and activity transparency are crucial for the success of problem management. Moreover, the buy-in from support teams and business teams is also required.

1. A culture of transparency

Our department has nothing to hide from. We're on a path of continuous improvement, and we partner with our business teams to become ever better.

Don't be afraid of the data and the story it has to tell. Be afraid of doing nothing with it; be afraid of hiding from it.

2. Management support

IT leadership understands the value of this role and supports it from the top down.

Through this model, all IT teams have supported what the process can accomplish and continues to accomplish.

3. A willingness to change

Employees need to support and buy into the process. Teams have consistently demonstrated the value of problem management and integrate with it regularly.

Throughout, processes were simplified by combining similar areas. This is also where ITIL, Lean, Six Sigma, and other methodologies were integrated into one another.

*"In the beginning, Problem Management was a real annoyance for me. That is, until I took the time to allow the process to work. **Instead of only treating the symptoms, Problem Analysis identifies and resolves the root cause.** Therein lies the true value."*

Jillian Gustafson

Manager – IT Manufacturing Systems

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