

## Quality at a Glance

Use this resource to refresh your understanding of how the Quality focus contributes to new product commercialization across the phases of 3M | Grow.

### Build Business Case

#### Quality Tasks

- Translate customer wants and needs into customer requirements, and then further translate these Critical to Quality requirements (CTQs)
- Define or develop test methods to measure CTQs
- Test concepts or prototypes for performance

#### How You'll Do It

- Link customer requirements to measurable product properties and raw material characteristics
- Begin use of the following tools: House of Quality (HOQ), the Design Qualification Matrix (DQM), Measurement System Analysis (MSA) tools, Design of Experiments (DOE), and Failure Mode and Effects Analysis (FMEA)

#### How You'll Work as a Team

- Collaborate with the cross-focus team to begin gathering information for the Design Review, Quality Plan, and data package; create an action plan to address key gaps
- Work with the technical team to develop the experimental plan and evaluate Lab or pilot scale prototypes
- Contribute to the raw material plan and supplier plan
- Review and document the product design with the Lab and Manufacturing team and record the results in the Design Review and DQM

### Development

#### Quality Tasks

- Ensure that the voice of the customer and voice of the process remain aligned and are translated into robust test methods
- Update the Product Quality Assurance Plan and data packages with additional information from pilot or manufacturing scale runs
- Update the Design Review to reflect any design modifications, and additional testing

### **How You'll Do It**

- Continue to complete the Product Quality Assurance Plan and Design Review with the latest data from pilot and full-scale manufacturing runs
- Update the HOQ, DQM, and FMEA as needed
- Ensure specification ranges reflect customer requirements
- Confirm test methods and process capability using statistical tools

### **How You'll Work as a Team**

- Collaborate with the cross-focus team to update information for the Design Review, Quality Plan, and data package; create an action plan to address key gaps
- Review and document any updates to the product and process design
- Confirm design continues to meet customer requirements

## **Scale Up**

### **Quality Tasks**

- Finalize and implement the HOQ, DQM, and FMEA
- Use statistical tools to confirm process capability and all test methods are validated and capable
- Ensure action items from the Design Review are complete
- Evaluate product and process performance using statistical methods
- Validate the design meets customer requirements

### **How You'll Do It**

- Finalize the HOQ, DQM, and FMEA
- Use statistical tools to confirm process capability and all test methods are validated and capable
- Ensure all suppliers are qualified and capable

### **How You'll Work as a Team**

- Collaborate with the cross-focus team to finalize the Quality Plan and data package; ensure action items are complete
- Align on a robust manufacturing Control Plan

## Launch

### **Quality Tasks**

- Monitor Manufacturing capability relative to specifications
- Monitor and respond to customer/end-user feedback

### **How You'll Do It**

- As part of the Manufacturing Control Plan, measure and review manufacturing and technical results, including capability indices and test methods and sampling
- Ensure the product continues to meet customer expectations by using statistical processes, controls, and root cause analysis tools

### **How You'll Work as a Team**

- Contribute to the team's Wrap Up and lessons learned activities