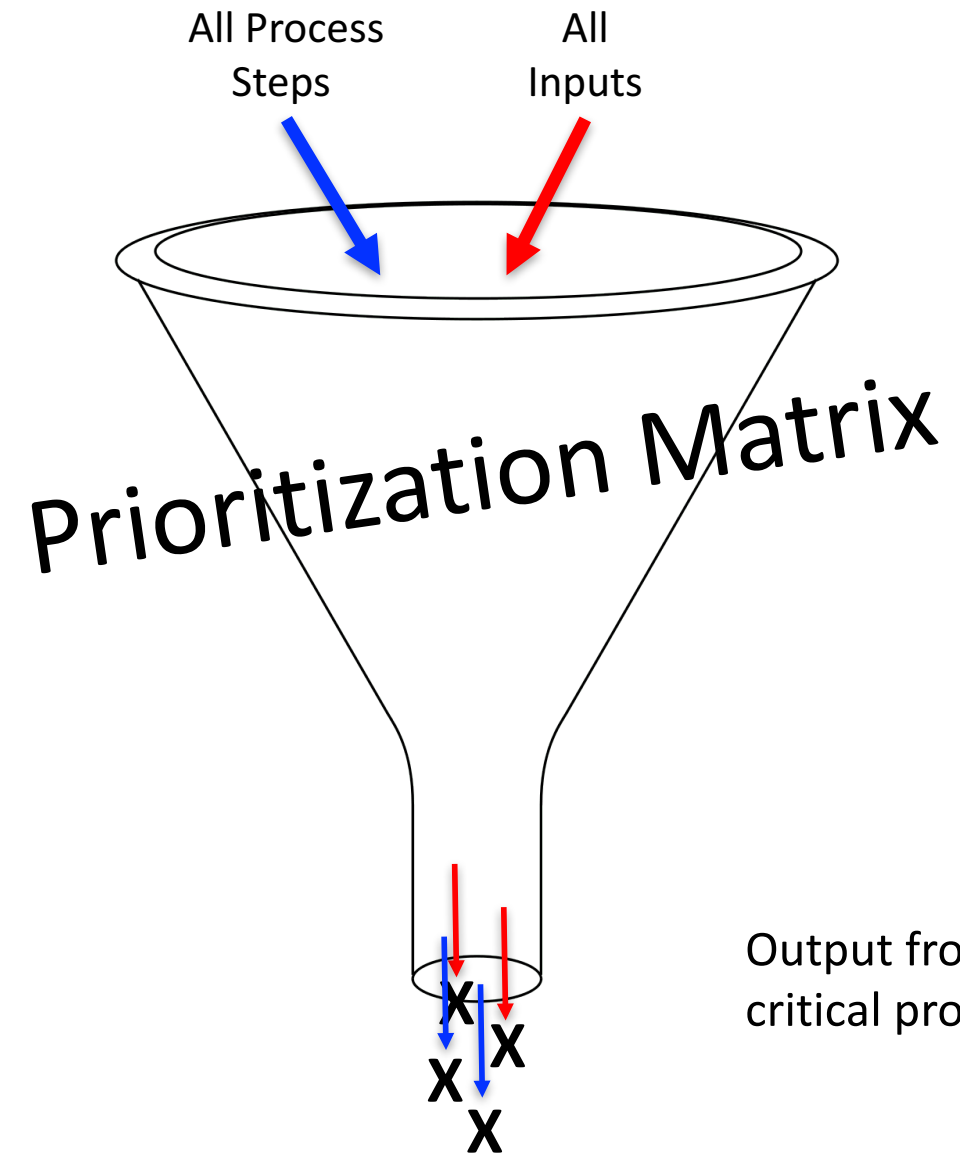


# Prioritization Matrix

Operational Decision Excellence

When you are short on time, how can you reduce your chance of a wrong decision?



Output from the matrix are the critical process steps or inputs

# Prioritization Matrix

## Why a Priority Matrix:

- Identify *critical* few variables
- Focuses on the improvement initiative
- Formulate theories about cause & effect
- Minimize the size of the FMEA

## When to use a Priority Matrix:

- To many variables or process steps
- Collecting data about all possible variables would cost too much, either time or money

# Prioritization Form

Cause & Effect Prioritization Matrix										
Rating for the effect each input could have on the output		None = 0, no effect or unrelated								
		Remote = 1, remote chance of effect								
		Slight = 3, may impact but highly unlikely to effect								
		Moderate = 5, moderate impact or possible effect								
		High/Direct = 9, high impact or direct effect								
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight										
Weight			2							Total Rating
Process Outputs		1								
Process Steps (Inputs)										
1									0	
2	3		4						0	5
3									0	
4									0	
5									0	

## Steps:

1. List Outputs
2. Assign Weight to Outputs
3. List Inputs
4. Evaluate the Relationship (Rate the Effect)
5. Calculate the Correlation Ratings
6. Assess Inputs with High Ratings

# Step 1: List Output Variables

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated								
	Remote = 1, remote chance of effect								
	Slight = 3, may impact but highly unlikely to effect								
	Moderate = 5, moderate impact or possible effect								
	High/Direct = 9, high impact or direct effect								
Total Rating = Sum of each Process Input <div>2</div> tion multiplied by its Process Output Weight									
Weight									Total Rating
Process Outputs	Cookies Size	Cookies Taste	# of Cookies per Package	Cost					
Process Steps (Inputs)									
1									0
2	<div>3</div>		<div>4</div>						0 <div>5</div>
3									0
4									0
5									0

Example taken from cookie backing practice

“Outputs” can be:

1. Big Y's from the process
2. Output Variables (y's) that require improvement

# Step 2: Weight the Outputs

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated							
	Remote = 1, remote chance of effect							
	Slight = 3, may impact but highly unlikely to effect							
	Moderate = 5, moderate impact or possible effect							
	High/Direct = 9, high impact or direct effect							
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight								
Weight	5	8	3	4				Total Rating
Process Outputs	Cookies Size	Cookies Taste	# of Cookies per Package	Cost				
Process Steps (Inputs)								
1								0
2	3		4					0
3								0
4								0
5								0

1. Team develops the weight, based on customer input
2. Higher the importance, the higher the weight value  
(Recommend weights from 1 to 10)

# Step 3: List the Outputs

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated							
	Remote = 1, remote chance of effect							
	Slight = 3, may impact but highly unlikely to effect							
	Moderate = 5, moderate impact or possible effect							
	High/Direct = 9, high impact or direct effect							
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight								
Weight	5	8	3	4				Total Rating
Process Outputs	Cookies Size	Cookies Taste	# of Cookies per Package	Cost				
Process Steps (Inputs)								
1	Mix cookie dough							0
2	Form cookies							0
3	Bake cookies							0
4	Inspect cookies							0
5	Package cookies							0

“Inputs” can be:

1. Process Steps from the Process Map (PMAP)
2. Inputs (x's) listed on the PMAP

# Step 4: Evaluate the Relationship

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated								
	Remote = 1, remote chance of effect								
	Slight = 3, may impact but highly unlikely to effect								
	Moderate = 5, moderate impact or possible effect								
	High/Direct = 9, high impact or direct effect								
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight									
Weight		5	8	3	4				Total Rating
Process Outputs		Cookies Size	Cookies Taste	# of Cookies per Package	Cost				
Process Steps (Inputs)									
1	Mix cookie dough	1	5	0	1				49
2	Form cookies	9	1	5	5				88
3	Bake cookies	3	9	0	3				99
4	Inspect cookies	0	1	0	5				28
5	Package cookies	0	1	9	5				55

5

1. Rate the effect each input could have on each output
2. Use rating scale listed in above form or one developed by the team



# Step 5: Calculate Rating

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated							
	Remote = 1, remote chance of effect							
	Slight = 3, may impact but highly unlikely to effect							
	Moderate = 5, moderate impact or possible effect							
	High/Direct = 9, high impact or direct effect							
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight								
Weight	5	8	3	4				Total Rating
Process Outputs	Cookies Size	Cookies Taste	# of Cookies per Package	Cost				
Process Steps (Inputs)								
1	Mix cookie dough	1	5	0	1			49
2	Form cookies	9	1	5	5			88
3	Bake cookies	3	9	0	3			99
4	Inspect cookies	0	1	0	5			28
5	Package cookies	0	1	9	5			55

1. Spreadsheet Auto-calculates by cross multiplying the 'weight' and correlation values for each input and sums for each input
2. Example Rating (Mix Cookie Dough) =  $(5 \times 1) + (8 \times 5) + (3 \times 0) + (4 \times 1) = 49$

# Step 6: Highlight Critical Few

Cause &amp; Effect Prioritization Matrix

Rating for the effect each input could have on the output	None = 0, no effect or unrelated							
	Remote = 1, remote chance of effect							
	Slight = 3, may impact but highly unlikely to effect							
	Moderate = 5, moderate impact or possible effect							
	High/Direct = 9, high impact or direct effect							
Total Rating = Sum of each Process Input Correlation multiplied by its Process Output Weight								
Weight	5	8	3	4				Total Rating
Process Outputs	Cookies Size	Cookies Taste	# of Cookies per Package	Cost				
Process Steps (Inputs)								
1	Mix cookie dough	1	5	0	1			49
2	Form cookies	9	1	5	5			88
3	Bake cookies	3	9	0	3			99
4	Inspect cookies	0	1	0	5			28
5	Package cookies	0	1	9	5			55

## Inputs with Largest Rating:

1. Most critical, have the biggest impact on the outputs
2. This inputs can be evaluated in an FMEA

# Prioritization Matrix Summary

- Identifies the *Critical Few*
- Provides focus in the correct area(s)
- Establishes a *Cause & Effect* Relationship
- Minimizes the Waste of Time
- Saves Money