

# A Recipe for Success!

## 10 Ingredients for a Healthy Gage Management System



June 22, 2021



**QUALITYDIGEST**



# Meet the Presenters



**Eric Gasper**

Sr. Product Development Specialist  
PQ Systems



**Derek Benson**

Product & Application Support Manager  
PQ Systems



Where did your Gage System come from?

Brand new?

Taking over existing?

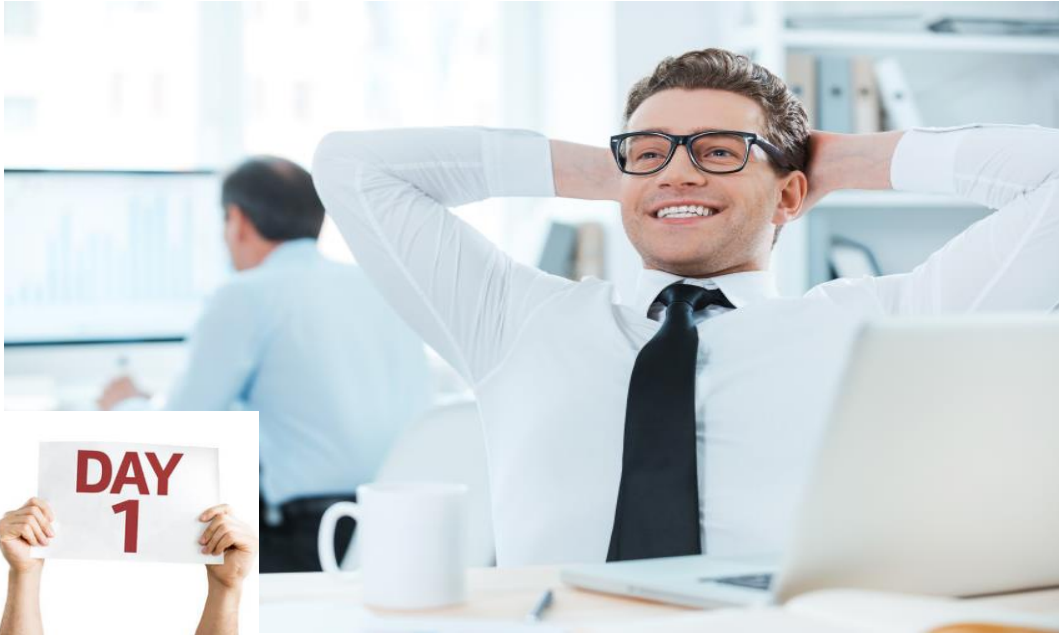


# Where did your Gage System come from?



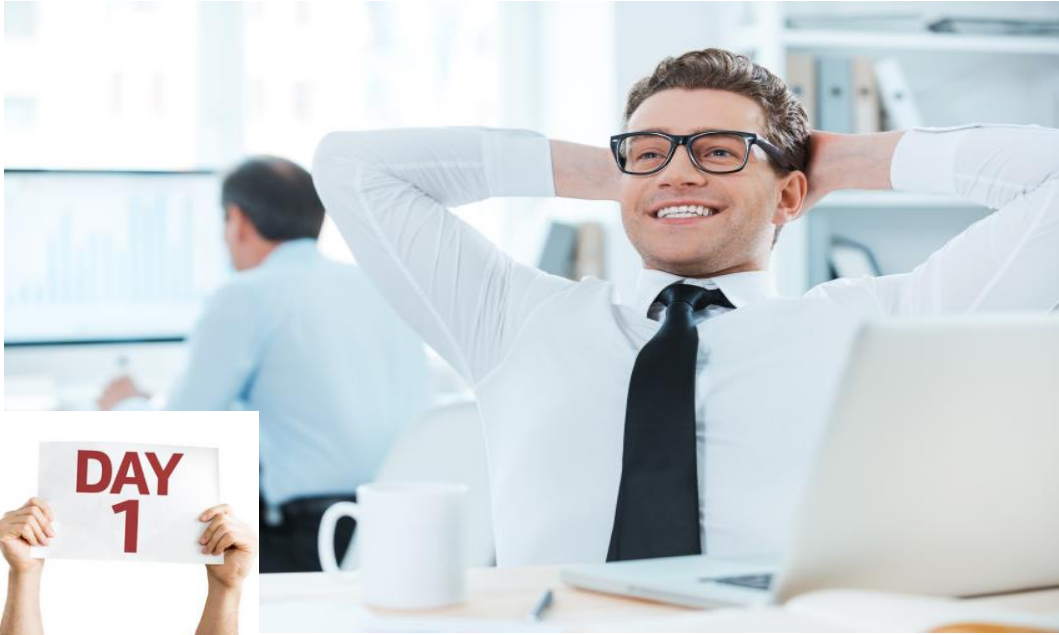


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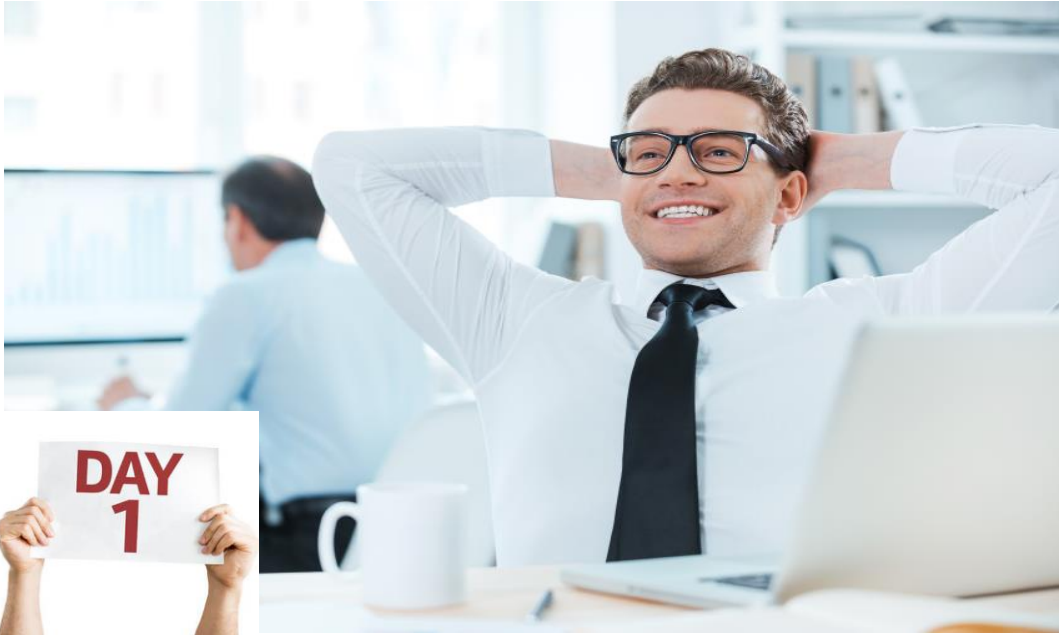


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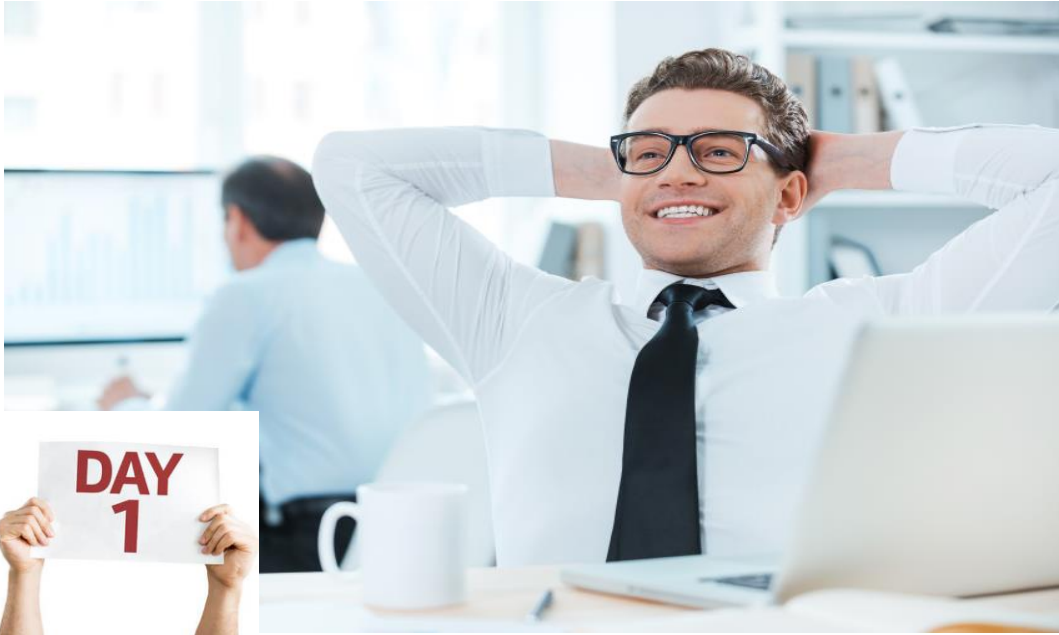


# Where did your Gage System come from?





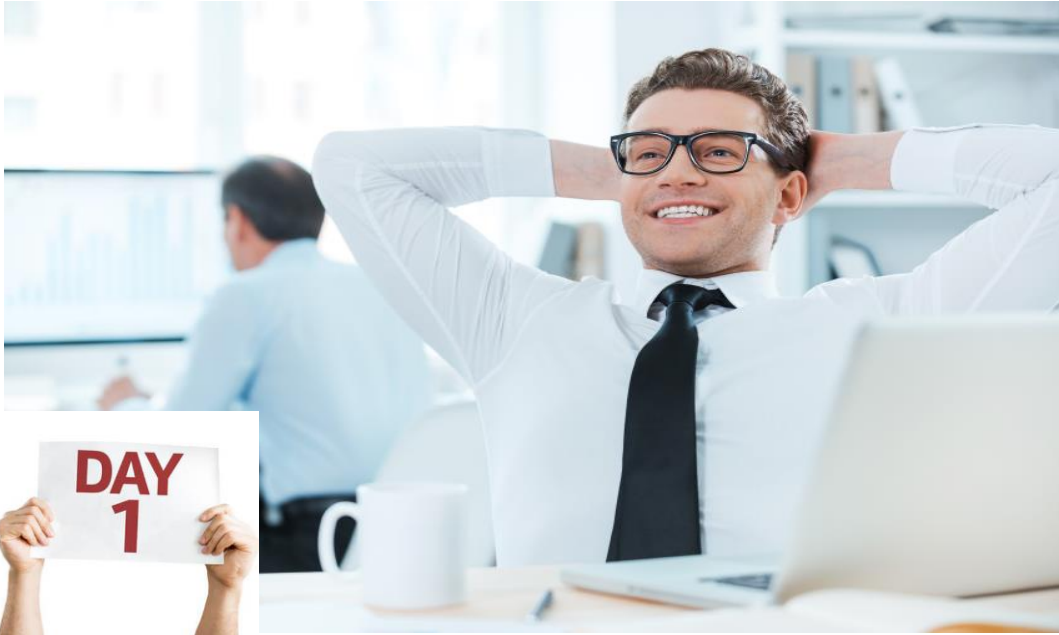
# Where did your Gage System come from?







# Where did your Gage System come from?



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 1:

*Gage Inventory Details*





# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:** *Gage Management*

**PREP TIME:** *30 min*      **COOK TIME:** *1 hour*      **SERVES:** *Everyone*

**INGREDIENT 1:**

*Make sure you know the gage number, gage type, current location, and due dates of all the gages in your system. Though additional information is nice, it's generally a waste of time.*






# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:


*1 hour*

SERVES:


*Everyone*



INGREDIENT 1:



*Make sure you know the gage number, gage type, current location, and due dates of all the gages in your system. Though additional information is nice, it's generally a waste of time.*





*improve it!*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 1:

*Include as many details as you're aware of related to your gages. They may not seem immediately necessary, but envision scenarios where having that information may become helpful. The more details that exist, the more power you'll have to extract useful information from your system.*






Where are  
my gages??

I need those  
certificates from  
last year!


*27 calibrations  
overdue!?*



Why did I take  
this job?



Where are  
my gages??



I need those  
certificates from  
last year!



*27 calibrations  
overdue!?*



## Questions?

- Managers
- Customers
- Auditors



## Questions?

- Managers
- Customers
- Auditors



**Eric Gasper** 1:41 PM

I need a list of the gages we have that we bought last year. Specifically, the digital calipers we got from Mitutoyo which were sent to production Line 7 and are now on a 4 month calibration cycle.

## Questions?

- Managers
- Customers
- Auditors



**Eric Gasper** 1:41 PM

I need a list of the gages we have that we bought last year. Specifically, the digital calipers we got from Mitutoyo which were sent to production Line 7 and are now on a 4 month calibration cycle.



**Derek Benson** 1:50 PM

Not sure we've done the best job documenting all those details in GAGEpack. Let me ask around and try to come up with something for you.

## Questions?

- Managers
- Customers
- Auditors

## Answers:



**Eric Gasper** 1:41 PM

I need a list of the gages we have that we bought last year. Specifically, the digital calipers we got from Mitutoyo which were sent to production Line 7 and are now on a 4 month calibration cycle.



**Derek Benson** 1:50 PM

Not sure we've done the best job documenting all those details in GAGEpack. Let me ask around and try to come up with something for you.

## Questions?

- Managers
- Customers
- Auditors

## Answers:

Hopefully in your Gage Management System



**Eric Gasper** 1:41 PM

I need a list of the gages we have that we bought last year. Specifically, the digital calipers we got from Mitutoyo which were sent to production Line 7 and are now on a 4 month calibration cycle.



**Derek Benson** 1:50 PM

Not sure we've done the best job documenting all those details in GAGEpack. Let me ask around and try to come up with something for you.

# Make a Meal



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 2:

## *Gage Labels*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 2:

*Maintain accurate and up-to-date gage labels that display the most vital details about each gage*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 2:

*Maintain accurate gages that display the gage*



*Label each gage with a like about each*








# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*



SERVES:

*Everyone*



INGREDIENT 2:

*Maintain accurate and up-to-date gage labels  
that display the most vital details about each  
gage*





# Why do we need labels?

- Distinguishing between similar gages.
- Being aware of important dates.
- Organization and Traceability back to equipment history.

THE WHOLE  
STORY.

Gage #: C-01001  
Gage type: Caliper  
Assigned location: Spoiler Line  
Last calib date: 5/5/2016  
**Next due date: 11/5/2016**

# Keep it Relevant

- What's Important?



# Keep it Relevant



- **What's Important?**

**Gage Number**

Description

Model #

Manufacturer

Storage Location

Last Calibration Date

**Calibration Due Date**

Calibration Interval

Current Location

Status

Last Calibration by

Assigned to

Barcode

# Keep it Relevant



- **What's Important?**

Gage Number

Description

Model #

Manufacturer

Storage Location

Last Calibration Date

Calibration Due Date

Calibration Interval

Current Location

Status

Last Calibration by

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# Keep it Relevant



- **What's Important?**

Gage Number

Description

Model #

Manufacturer

Storage Location

Last Calibration Date

Calibration Due Date

Calibration Interval

Current Location

Status

Last Calibration by

Assigned to

Barcode

# Which are good labels?



**Gage #: C-01001**  
Gage type: Caliper  
Assigned location: Spoiler Line  
Last calib date: 5/5/2016  
**Next due date: 11/5/2016**



Asset #: C-01001  
Gage type: Caliper  
Purchase date: 7/15/2001  
Purchase price: 350  
Gage size: 1"  
Manufacturer: Fowler  
Calib due date: 8/25/2009  
Owner: Company



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 3:

## *Gage Locations*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 3:

*Tracking gage location has never seemed to be very useful here.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 3:

*Tracking gage  
very useful he*




*seemed to be*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*

**SERVES:**

*Everyone*



**INGREDIENT 3:**

*At any given moment, you should be able to understand where each gage resides. Track movements of your equipment to save time spent hunting lost gages.*





# The Impact of Lost Gages

In a given year, how much time does the average adult spend looking for lost belongings?



**2.5 Days**



# The Impact of Lost Gages

In a given year, how much time does the average adult spend looking for lost belongings?



**60 Hours**



# The Impact of Lost Gages

In a given year, how much time does the average adult spend looking for lost belongings?



**\$1500**



# The Impact of Lost Gages

In a given year, how much time does the average adult spend looking for lost belongings?



**\$30,000**

# The Impact of Lost Gages

- Lost gages are easy targets for auditors.





# The Impact of Lost Gages

- Lost gages are easy targets for auditors.
- A lost gage represents a risk because, if found, it could have potentially been used to measure a part on which it wasn't specified to be used.



# The Impact of Lost Gages

- Lost gages are easy targets for auditors.
- A lost gage represents a risk because, if found, it could have potentially been used to measure a part on which it wasn't specified to be used.
- Lost gages are also an investment from which you are no longer getting value.



# How do you store your gages?



# How do you store your gages?



# What do you do?





# What do you do?



# What do you do?



# What do you do?





# What do you do?



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 4:

## *Audit Records*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 4:

*Ensure you have a system in place which captures the "who, what, when, and why" for changes happening with your inventory.*

# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

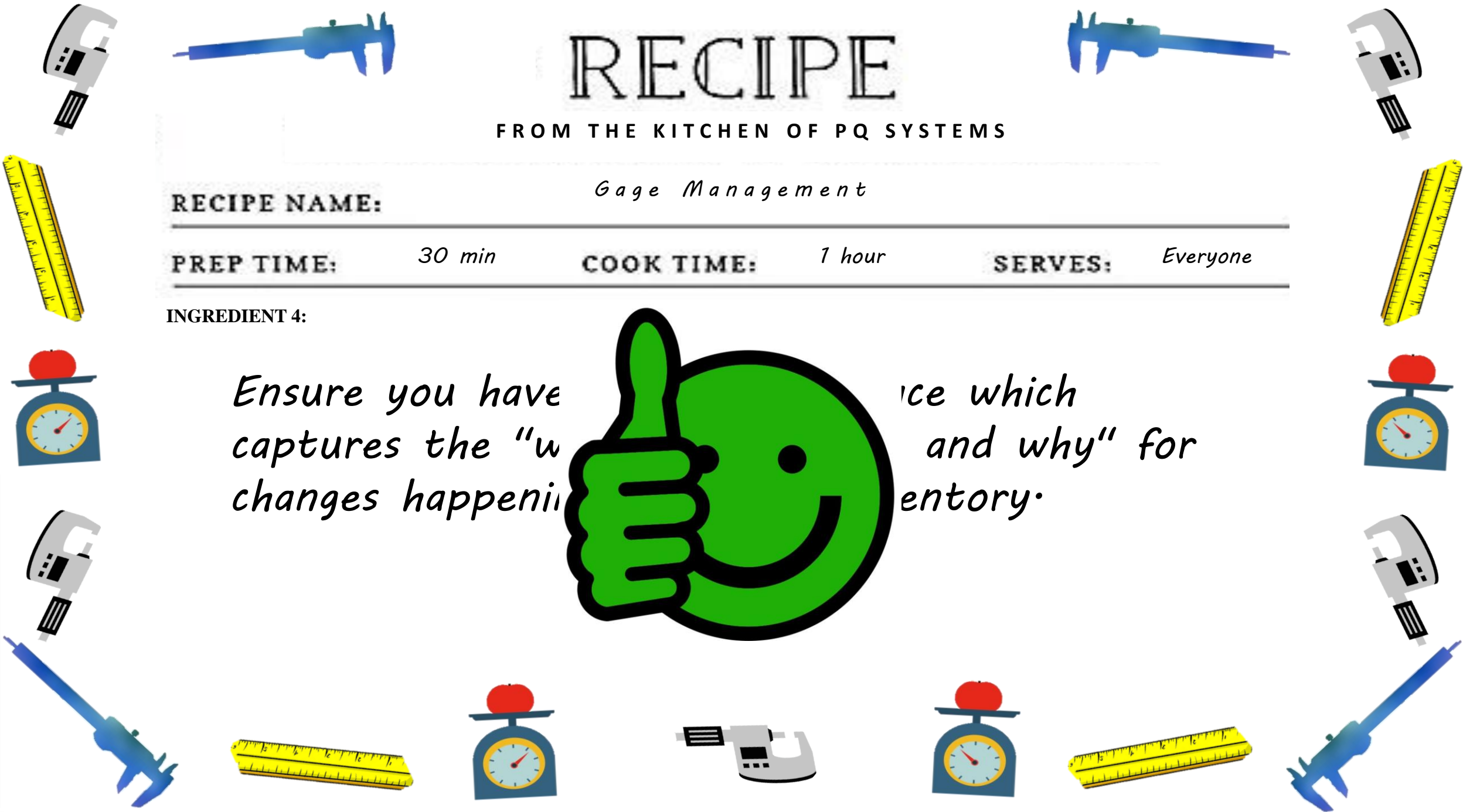
*Everyone*

INGREDIENT 4:

*Ensure you have captures the "what changes happeni*



*nce which and why" for entory.*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 4:

*Ensure you have a system in place which captures the "who, what, when, and why" for changes happening with your inventory.*

# What's she going to ask me?



- Are you using any overdue gages?
- Can you show me the calibration history for this gage?
- Why does this record look the way it does?
- Why did you do that?
- What is the evidence to support that?
- Can you explain that to me?
- Who else performs this function?







**dot the**



**i's**

**and cross the**

**t's**





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 5:

## *Scheduling Gage Events*






# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*



SERVES:

*Everyone*



INGREDIENT 5:

*Schedule all service events on all of our tools for October of each year to reduce the interruption caused by down time.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 5:

*Schedule all service of our tools  
for October of 2011 to minimize the  
interruption cost.*






# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:


*1 hour*

SERVES:


*Everyone*



INGREDIENT 5:



*Spread out the servicing events on tools at appropriate intervals throughout the year in order to reduce or eliminate downtime associated with these events.*



# Why Calibrate?

- Don't assume your gages are accurate.
- Never use a gage that's behind on calibration.
  - Implement systems that prevent it from happening, where possible.
- Calibrate routinely per gage manufacturer recommendations.

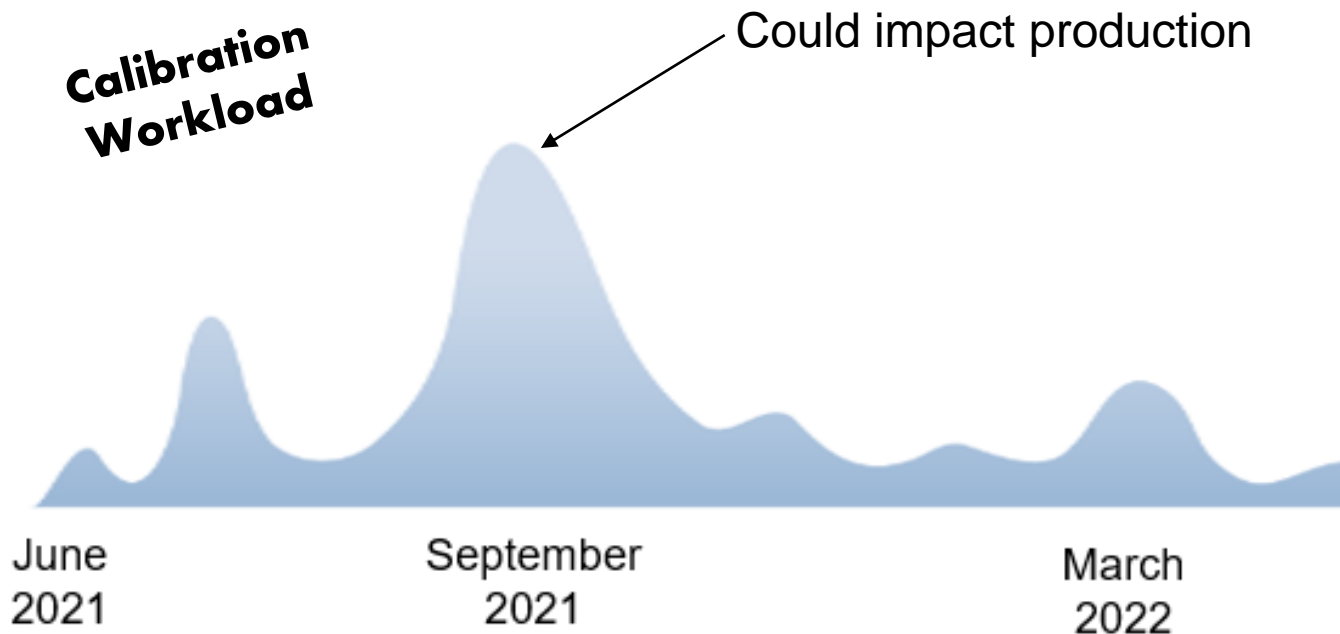
## **BONUS**

- VERIFY gage is holding accurate throughout calibration interval.





# Examine your Workload



- Be aware of peaks and valleys in your calibration scheduling so you can prepare.
- Work on calibration schedule to limit the peaks and valleys
- Calibrate early, if possible, to flatten the curve.



# Calibration Intervals

Gages need to be checked at regular intervals to ensure they are accurate. But what is the right interval? How often should the technicians calibrate the gage?

Too often – waste of time and money!

Not often enough – possibly using a bad gage to check your parts!

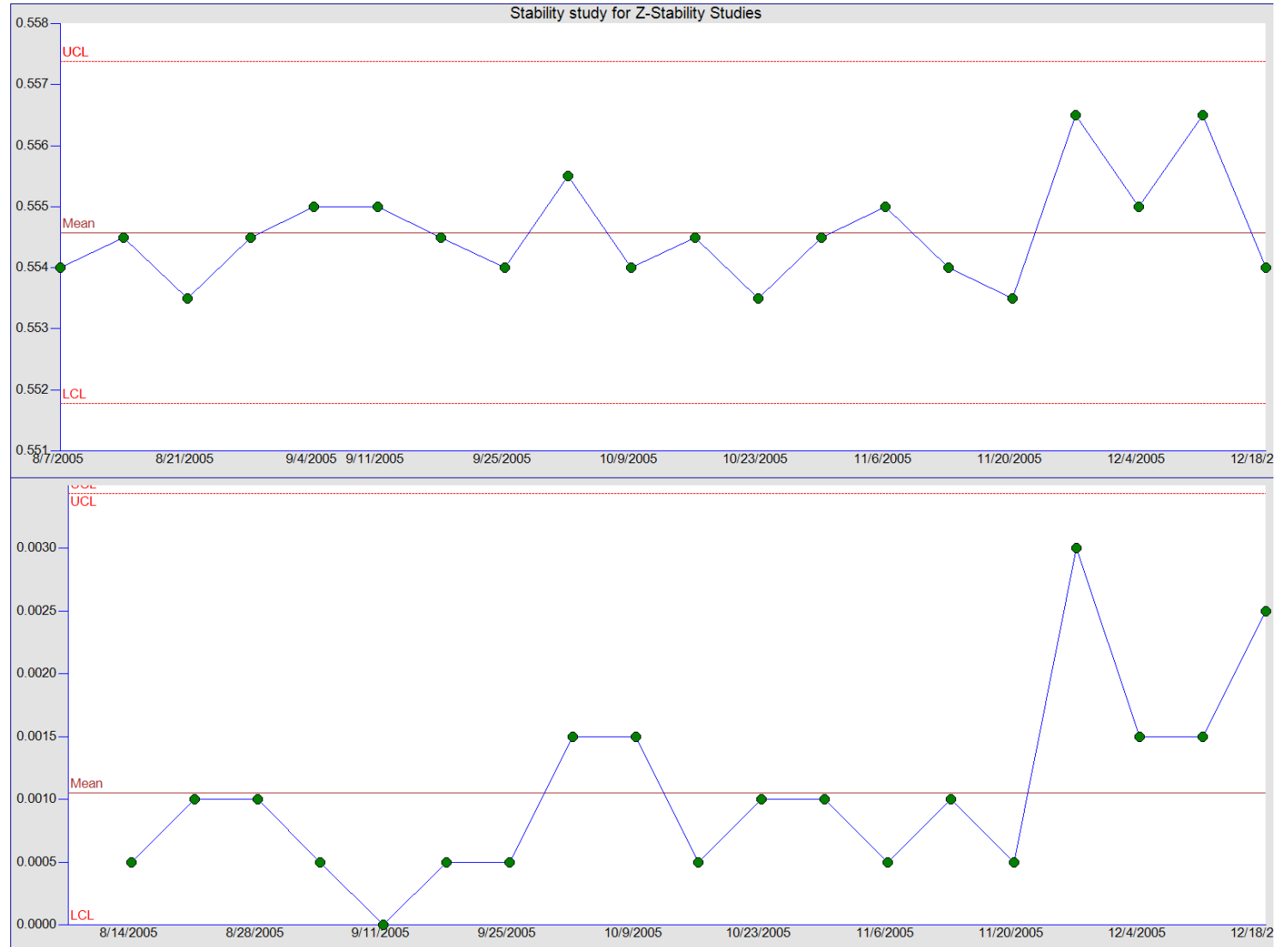


# Stability Study

A Stability study can be done to determine if your measurement system is stable (in control).

Checking to see if a gage is consistent and predictable between calibration cycles.

## Results



## Results



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 6:

## *Notifications*






# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*



**SERVES:**

*Everyone*



**INGREDIENT 6:**

*Set a reminder for yourself to review the inventory every so often for upcoming service events.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

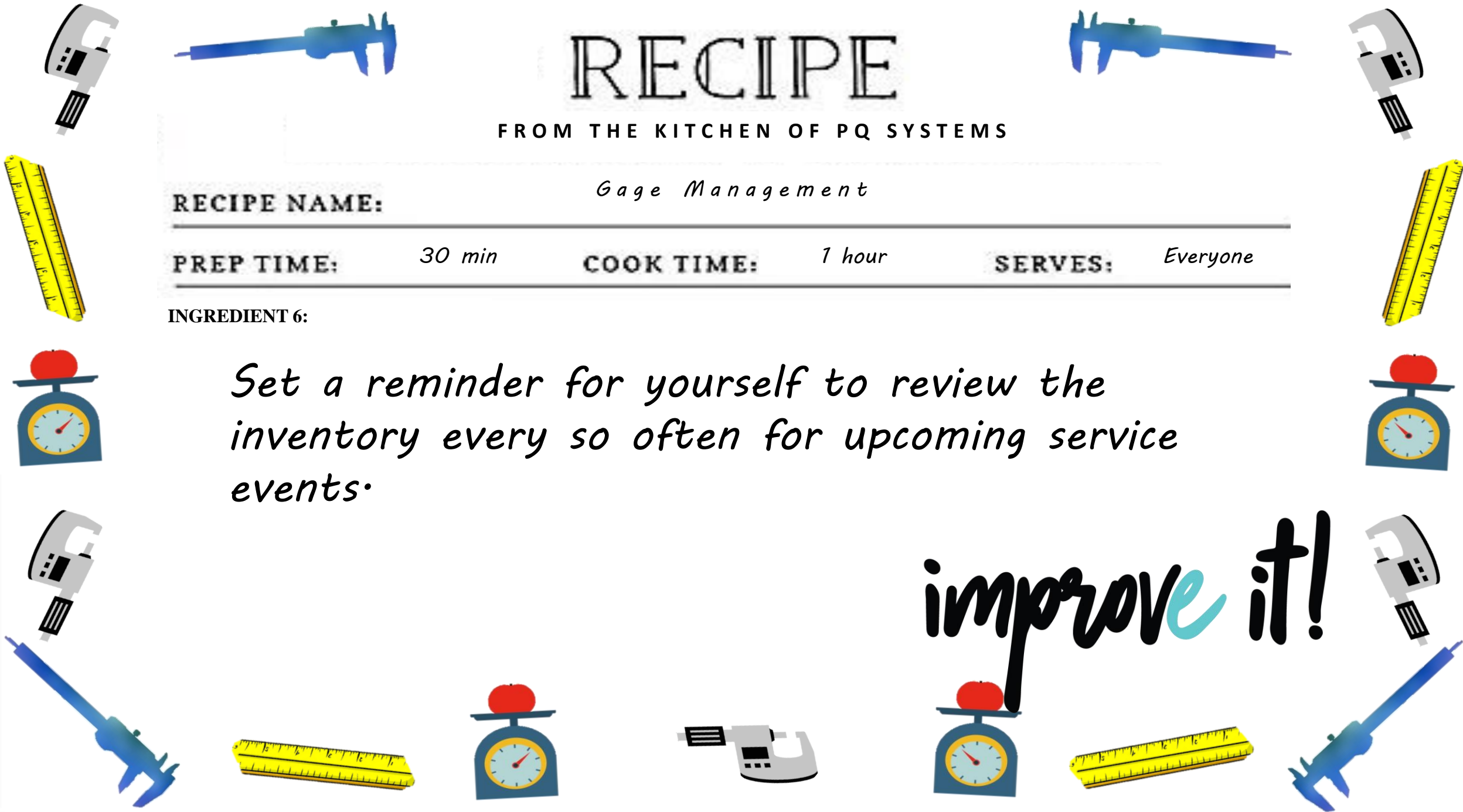
SERVES:

*Everyone*

INGREDIENT 6:

*Set a reminder for yourself to review the inventory every so often for upcoming service events.*

*improve it!*








# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*



**SERVES:**

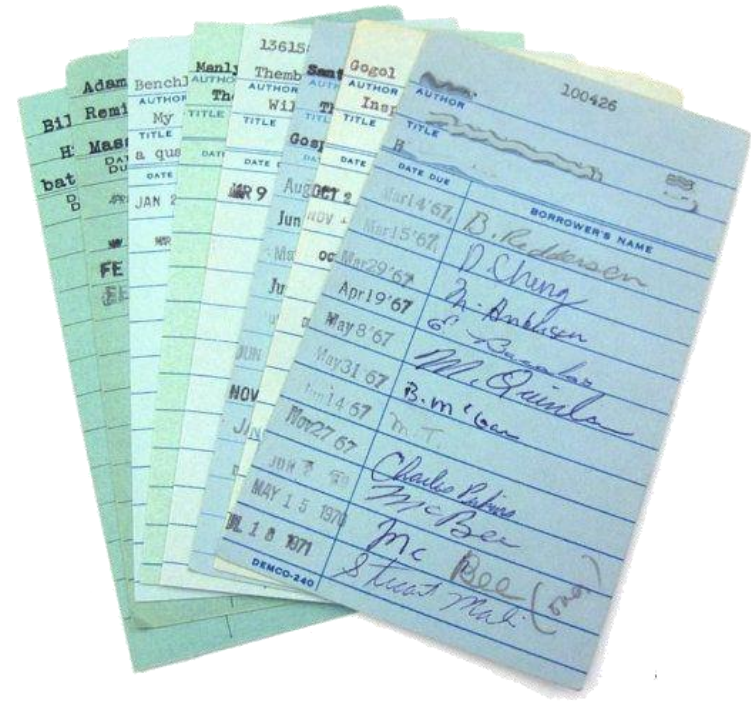
*Everyone*



**INGREDIENT 6:**

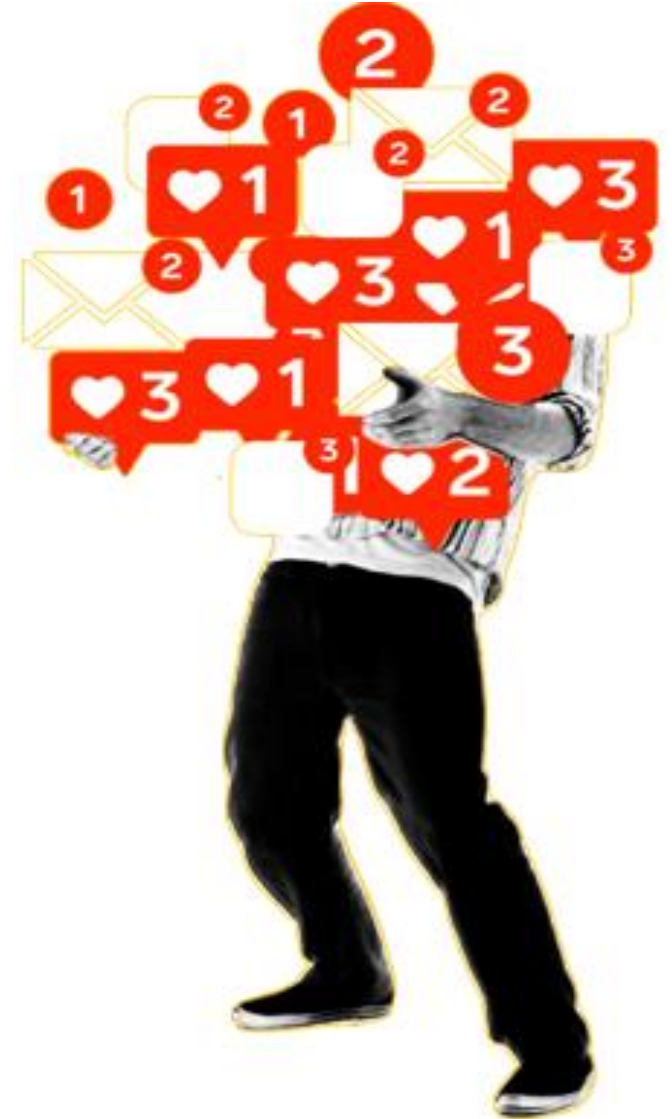
*Leverage technology to notify you of upcoming work to be completed on your gages so you don't find yourself using overdue gages.*











Strings too loose? *Won't play*

Strings too tight? *Will snap*

Strings tuned just right can play  
beautiful music!



Strings too loose? *Won't play*

Strings too tight? *Will snap*

Strings tuned just right can play  
beautiful music!

**HAPPY**

**MEDIUM**



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 7:

# MSA








# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*

**SERVES:**

*Everyone*



**INGREDIENT 7:**

*Remember to perform Measurement Systems Analysis on your gages to confirm they are measuring accurately.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 7:

*Remember to perform Measurement Systems Analysis on your gages to confirm they are measuring accurately.*


*improve it!*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*

**SERVES:**

*Everyone*



**INGREDIENT 7:**

*Remember to perform Measurement Systems Analysis to build trust and consistency in your measurement processes*



# What are MSA Studies?

Everybody has a “junk drawer” in their kitchen, right?

Measuring cups are used every day!

It is like a calibration – checking to see if your gage is measuring correctly against a known reference value.



# What are MSA Studies?

The “Specialty” Pampered Chef gadgets.



# What are MSA Studies?

The “Specialty” Pampered Chef gadgets.



Variable R&R Study



Attribute R&R Study

Uncertainty Study



Linearity Study



Stability Study



# Calibration vs MSA

## Checking for Accuracy – Within Tolerances



# Calibration vs MSA

An analysis of my ENTIRE measurement system





# Calibration vs MSA

An analysis of my ENTIRE measurement system



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 8:


## *Understanding Gage Usage*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 8:

*As long as you get all the calibrations done on-time, there's no need to document each time a gage is used to measure specific parts.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 8:

*As long as you calibrate your gages on-time, there's no need to calibrate each time a gage is used to measure parts.*






# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*



SERVES:

*Everyone*

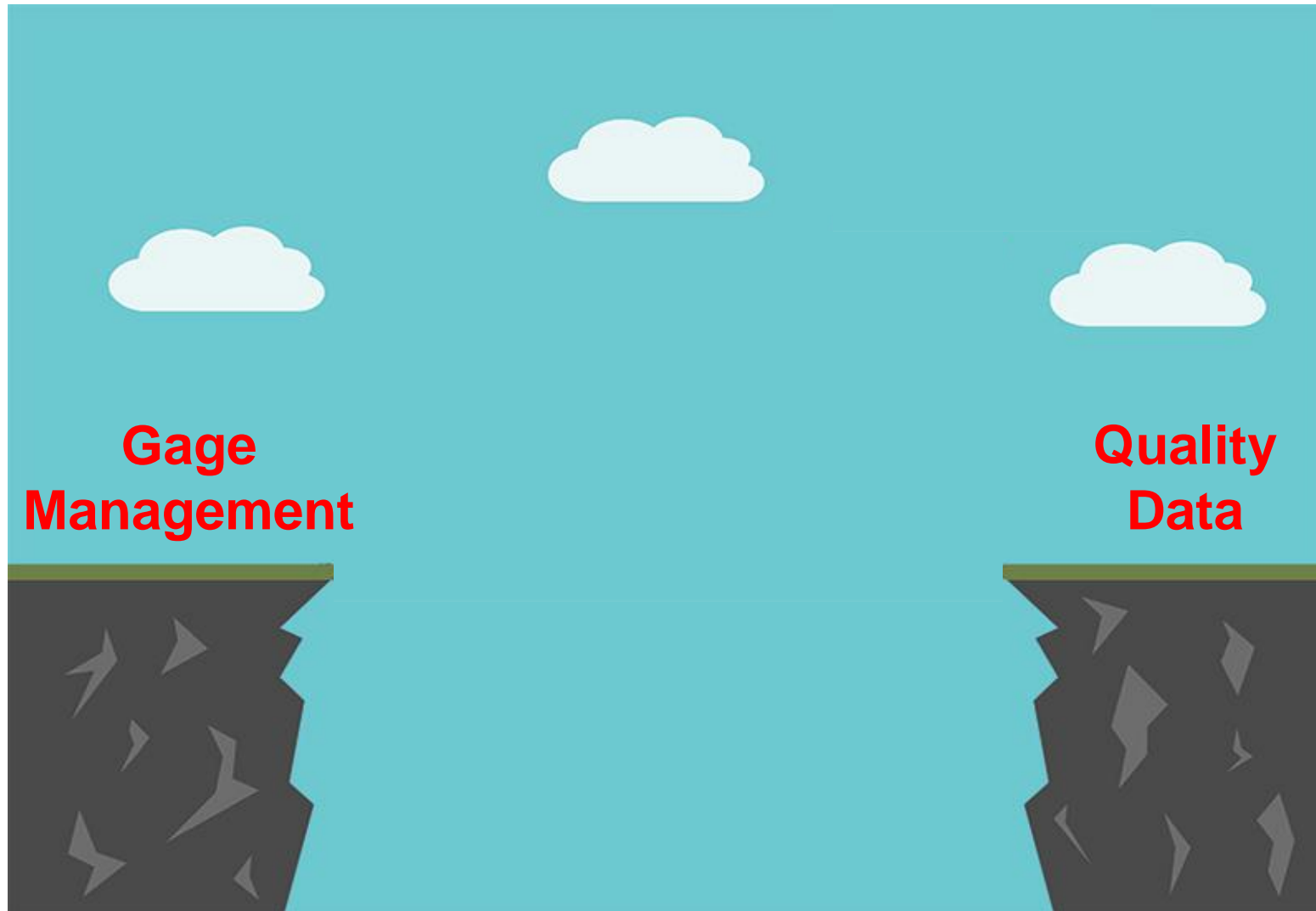


INGREDIENT 8:

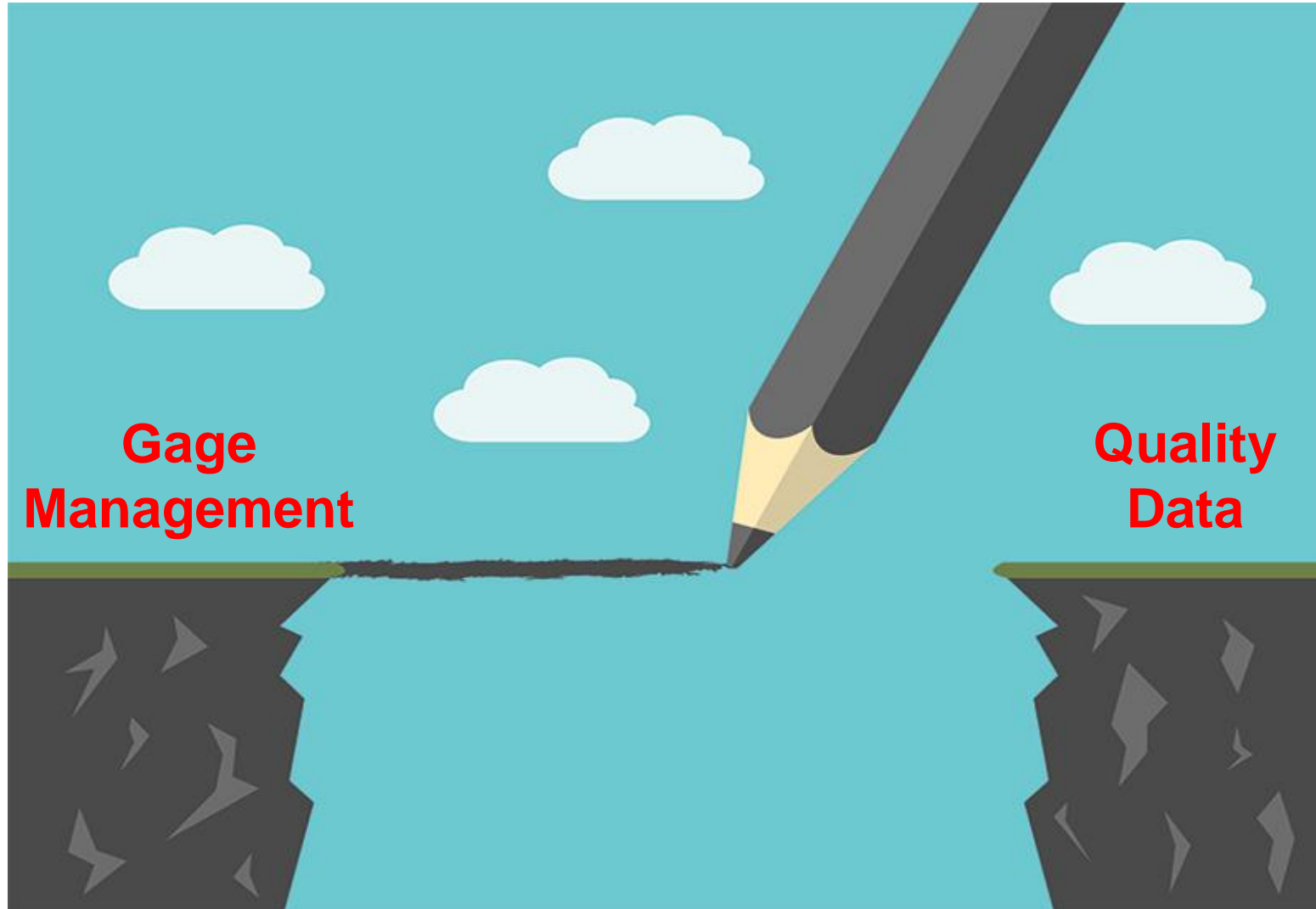
*Making a logical connection between the gages and the things they are measuring is, at some point, going to pay off big time!*



# Build a Bridge!



# Build a Bridge!



# What do you do?

The parts you sent me  
are the wrong size!



**YOUR CUSTOMER**



**YOU**





# What do you do?

**Calibration Certificate**  
**PQ Systems**

Gage number: C-06001      Manufacturer: Starrett  
Gage description: Precision vernier      Model number: S-12676  
Gage size: 5"      Serial number: 16756  
Accuracy: .001      NIST number:  
Calibration interval: 3 Month      Next due date: 5/15/2009

Describe any compensating corrections here:

---

Std/Master Identification and traceability information

Serial number	Gage number	Calibration date	Calibration due date
10034	MASTER-06001	1/16/2009	2/16/2010
10034	MASTER-06001		2/16/2010

**FAILED**

Overall calibration result: Pass

Name	Target	Units	Acceptable -	Acceptable +	Initial result	After adjustment
Min-Range	0.100	millimeters	0.099	0.101	0.100	0.100
Lo-End	2.000	millimeters	1.999	2.001	2.000	2.000
Hi-Range	4.000	millimeters	3.999	4.001	4.000	4.000
Max-Range	5.000	millimeters	4.999	5.001	5.000	5.000

Page 1 of 1

**GAGE**  
pack

Printed: 09/20/2011

# Build a Bridge!

- Document “Part-Usage” in your gage management system.  
Allows you to extract all suspect parts following calibration failure.
- Document “Gage-Usage” in your quality data collection system.  
Allows you to extract all involved gages following returned product.





## Parts associated with gages PQ Systems

11/8/2020

### All Gages

#### Gage number: DX-34585

Part name	Description
Part 2	Brake cylinder - Pontiac
Part 3	Brake cylinder - Chrysler
Part 5	Brake hose fitting - Pontiac

---- Parts: 3

#### Gage number: M-01002

Part name	Description
Part 4	Brake hose fitting - Ford

---- Parts: 1

#### Gage number: MASTER-06001

Part name	Description
Part 2	Brake cylinder - Pontiac

---- Parts: 1

#### Gage number: MASTER-06002

Part name	Description
Part 2	Brake cylinder - Pontiac

---- Parts: 1



## Gages associated with parts PQ Systems

11/8/2020

### All Parts

#### Name: Part 1

Gage number	Gage type	Current location	Last calib date	Calib due date
PQS CAL 0001	Caliper	Gage Room		
PQS CAL 001	Caliper	Gage Room	4/13/2020	1/10/2020
PQS CAL 02	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 03	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 04	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 05	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 06	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 07	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 08	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 09	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 10	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 11	Caliper	Gage Room	11/12/2019	1/10/2020
PQS CAL 12	Caliper	Gage Room	11/12/2019	1/10/2020

---- Gages: 13

#### Name: Part 2

Gage number	Gage type	Current location	Last calib date	Calib due date
DX-34585	Micrometer	Quality Lab	8/26/2019	6/26/2020
MASTER-06001	Master Blocks	Quality Lab	7/4/2019	7/3/2020
MASTER-06002	Master Blocks	Gage Room	7/18/2019	7/17/2020
PM-Cal-0001	Caliper	Plant Floor	5/3/2019	11/1/2019

---- Gages: 4

#### Name: Part 3

Gage number	Gage type	Current location	Last calib date	Calib due date
DX-34585	Micrometer	Quality Lab	8/26/2019	6/26/2020
PM-Cal-0002	Caliper	Plant Floor	5/6/2019	11/4/2019

# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 9:

*Record Retention*





# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:** *Gage Management*

---

**PREP TIME:** *30 min*      **COOK TIME:** *1 hour*      **SERVES:** *Everyone*

---

**INGREDIENT 9:**

*The record retention requirement for our industry is 5 years. Purge the gage management system annually to remove things greater than 5 years old.*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 9:

The record management for our industry is 5 years. We remove things greater than 5 years.





# RECIPE



FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:** *Gage Management*

---

**PREP TIME:** *30 min*      **COOK TIME:** *1 hour*      **SERVES:** *Everyone*

---

**INGREDIENT 9:**

*Though the record retention requirement for our industry is 5 years, there's really no need to purge aging records from your gage management system unless space becomes an issue.*

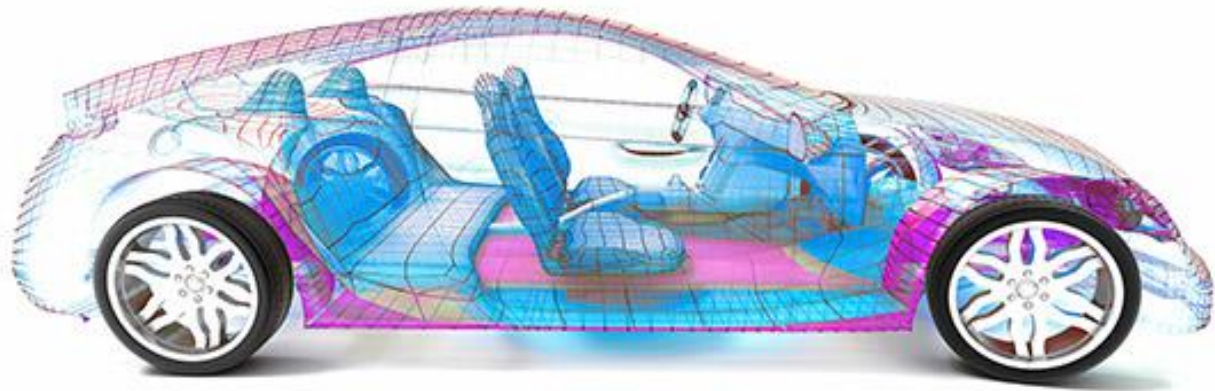




# What's Required of Me?



# What's Required of Me?



**5 Years**

# What's Required of Me?



**10 Years**

# What's Required of Me?



**2 Years**



# Reality...



# What if...



the doctor only sees  
the past 5 year's  
worth of your medical  
history before  
deciding how to treat  
you?

# What if...



Gage card

↑ C-05001 ↓ Checked out

General **History** Calibration Masters Kits Calibration steps R&R ⚠ Maintenance ⚠ PM tasks Vendors

Event type	Entered by	Event date	Name
Calibration	David Shattuck	04/19/2012	Passed first time
Maintenance	Hanen Alkhafaji	01/26/2012	General preventive maintenance
Calibration	David Shattuck	01/18/2012	Passed first test
R&R Study	Eric Gasper	11/24/2011	
Calibration	David Shattuck	10/19/2011	Passed first try
Calibration	David Shattuck	07/21/2011	Passed first check
Calibration	David Shattuck	04/07/2011	
Calibration	David Shattuck	01/23/2011	
R&R Study	Eric Gasper	11/25/2010	
Calibration	David Shattuck	10/24/2010	
Calibration	David Shattuck	02/23/2010	
Calibration	David Shattuck	11/24/2009	Adjustment made
R&R Study	Eric Gasper	11/24/2009	
Calibration	David Shattuck	07/23/2009	
Calibration	David Shattuck	07/23/2009	
Repair	DIONNE	01/06/2009	Gage returned for use
Other	BOB	01/06/2009	Send out for repair
Check-In	FRAN	01/06/2009	Fran Returned
Check-Out	FRAN	01/06/2009	Fran Check
Calibration	David Shattuck	10/26/2008	
Calibration	David Shattuck	07/31/2008	This gage was adjusted.
Check-In	DAVID GRISSON	07/30/2007	Checked in for calibration!


Show audit records Add new event View





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS



**RECIPE NAME:**

*Gage Management*

**PREP TIME:**

*30 min*

**COOK TIME:**

*1 hour*

**SERVES:**

*Everyone*

**INGREDIENT 10:**



*Your Team & Culture*



# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

*Everyone*

INGREDIENT 10:

*Employee buy-in is critical for the success of any quality process. Engage your teammates and make sure everyone understands why their roles in gage management matter.*

# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME:

*Gage Management*

PREP TIME:

*30 min*

COOK TIME:

*1 hour*

SERVES:

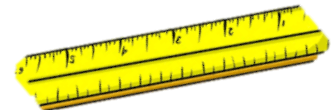
*Everyone*

INGREDIENT 10:

*Employee buy-  
any quality pro  
and make sure  
roles in gage m*



*the success of  
ur teammates  
tands why their  
ier.*





# RECIPE

FROM THE KITCHEN OF PQ SYSTEMS

RECIPE NAME: *Gage Management*

PREP TIME: *30 min*      COOK TIME: *1 hour*      SERVES: *Everyone*

INGREDIENT 10:

*Employee buy-in is critical for the success of any quality process. Engage your teammates and make sure everyone understands why their roles in gage management matter.*

# Creating a Real Team

Bring it on!



# Creating a Real Team



If you wish to motivate others,  
you must **captivate**  
them



# Motivation

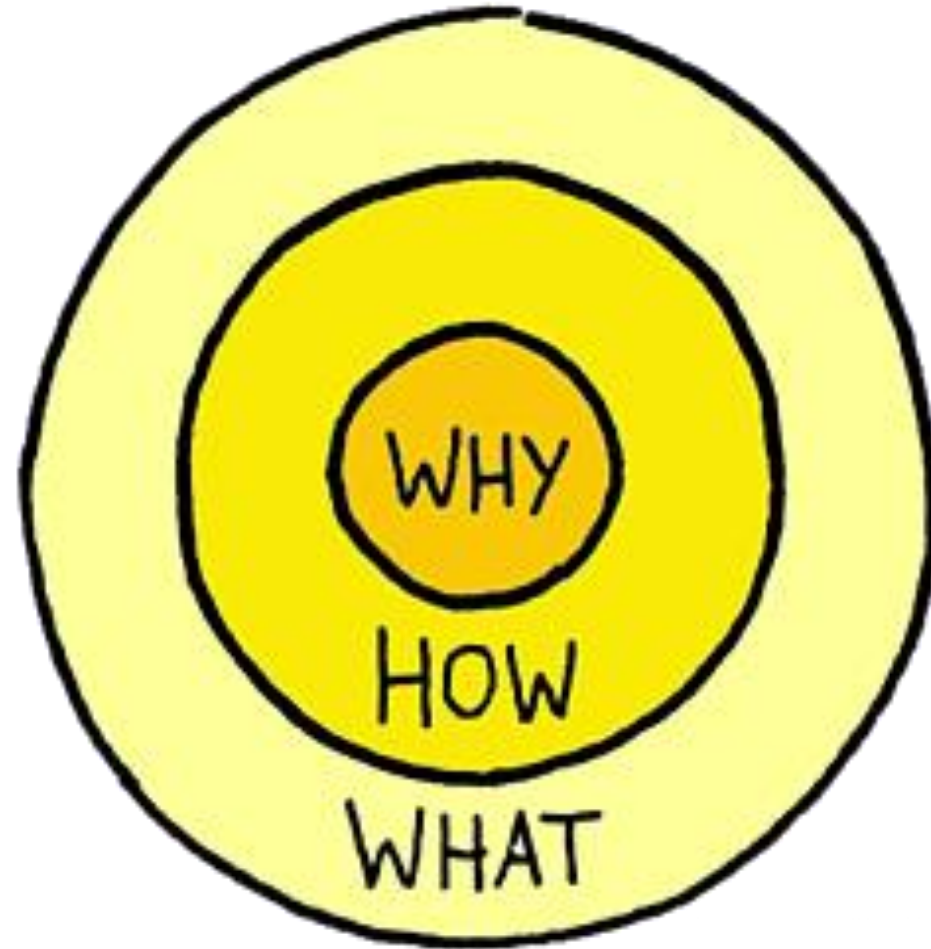
If you wish to motivate others,  
you must **inspire**  
them





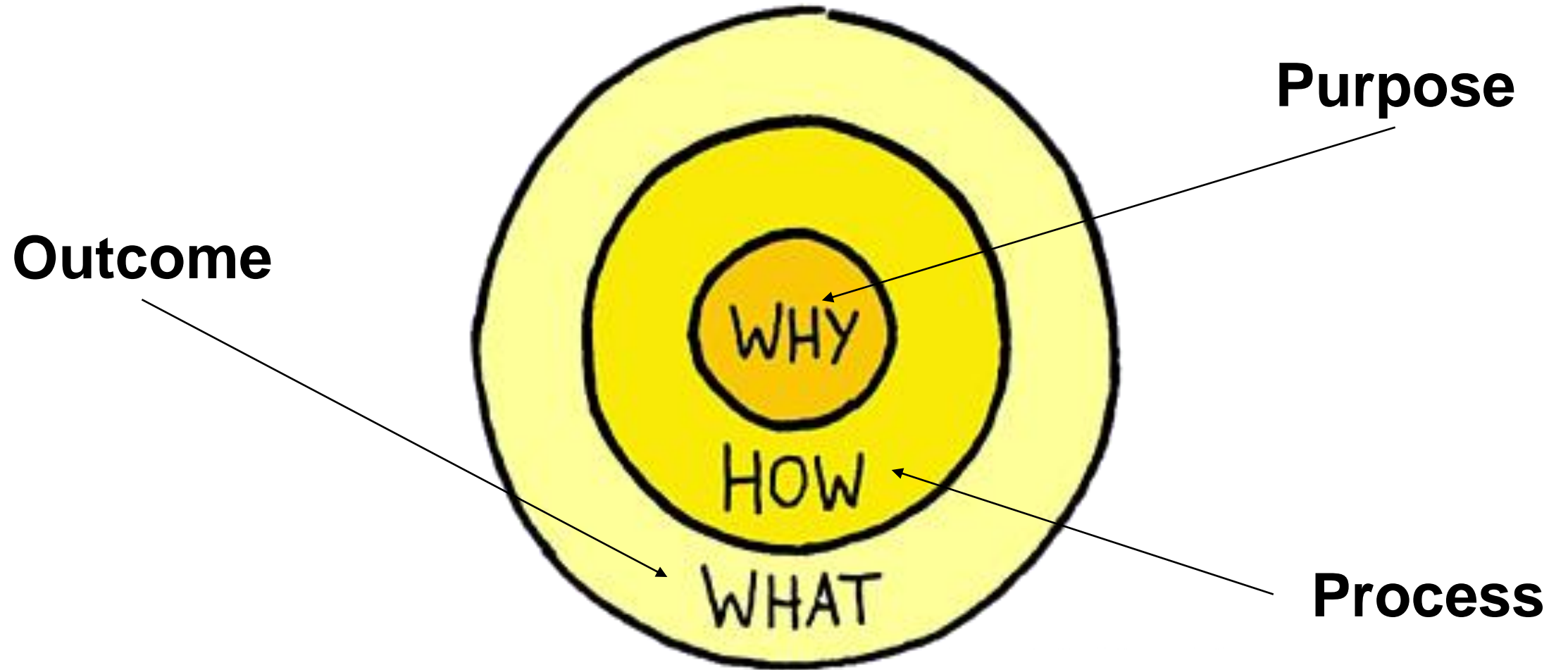
# The Golden Circle

Simon Sinek



# The Golden Circle

Simon Sinek



# The Golden Circle

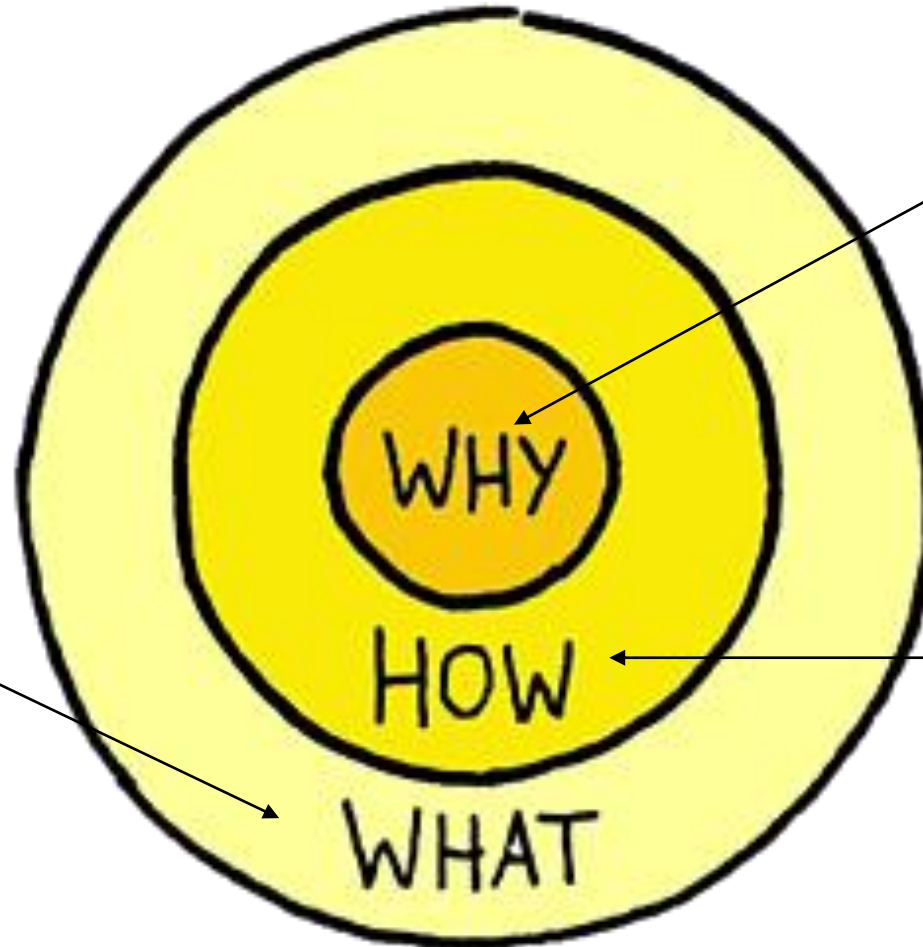
Simon Sinek



# How about Gage Management?

## Outcome

We know where all our gages are located, we know their history and we know they're accurate!



## Purpose

We believe in delighting our customers with 100% acceptable products – exactly as we've promised.

## Process

We've done all the things in this presentation to implement a sound, easy-to-use gage management system.







# Thank you, Quality Digest!



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