

# Operations Management

**Chris Sampson & Israel Cedillo**

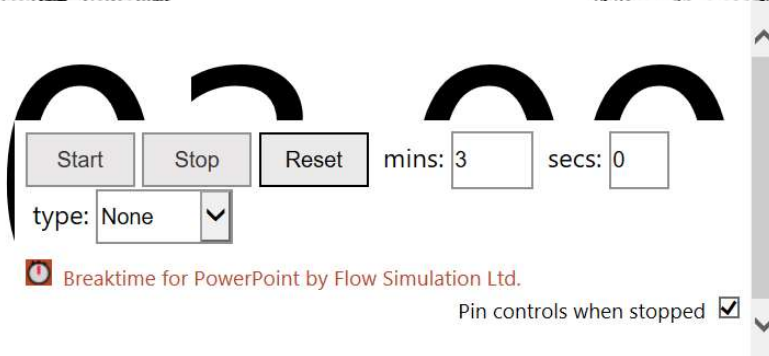
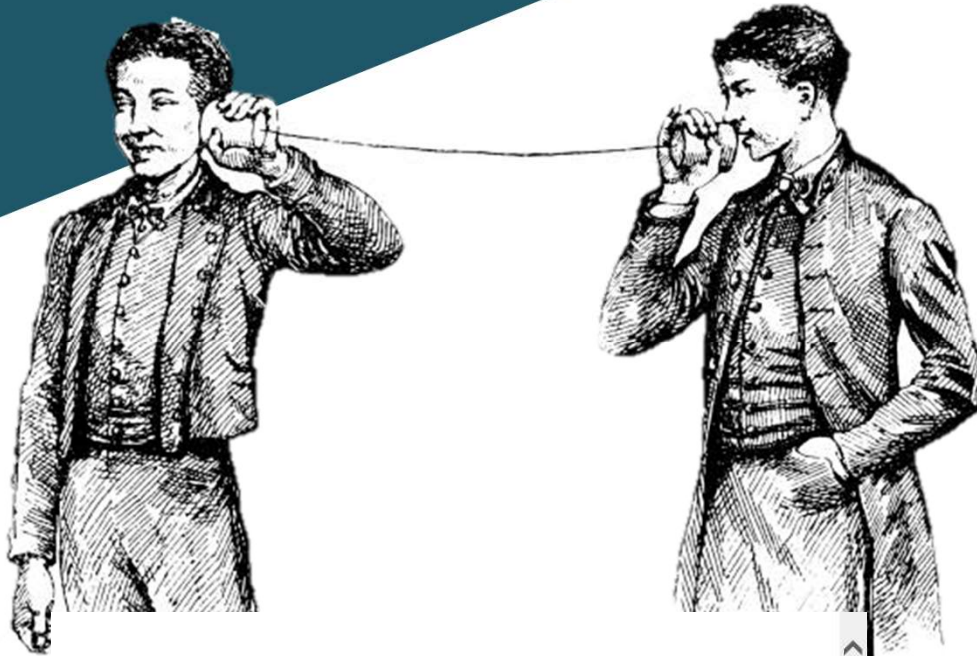
*Rinker Materials Concrete Pipe - Florida*

# Operations Management

---



# Communication



## Whisper Game

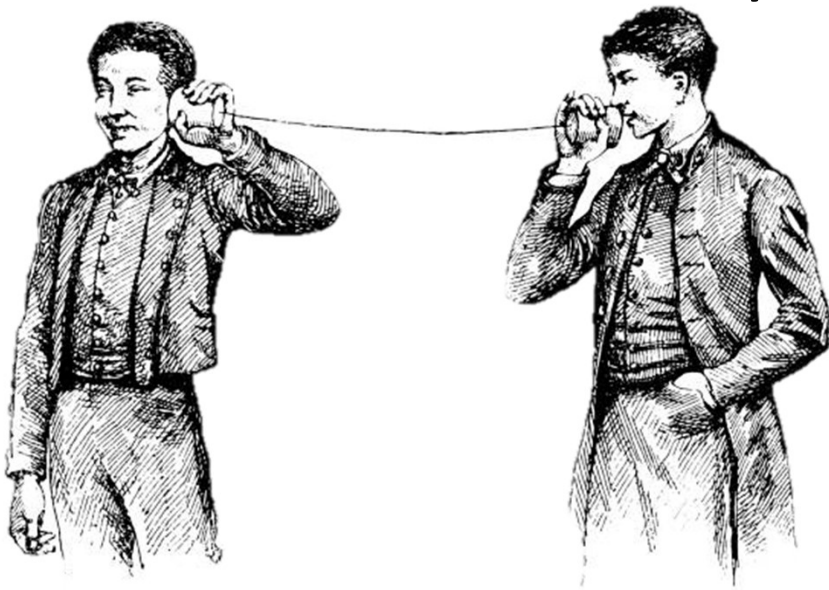
1. The first player in the row will be given a secret phrase. Do not show it to anyone.
2. Each player in the row will whisper the phrase they heard to the person on the other side of them.
3. The last player in the row will write down the phrase they are told.



# Communication

## Whisper Game

1. A dog chooses blue shoes to chew
2. Can you see what I see and say what I say?
3. I wash my hands wearing a wet wristwatch



# Operations Management

---



The background of the slide is a photograph of numerous large, white concrete pipes stacked in neat rows. The pipes are arranged in a perspective that recedes into the distance under a bright, cloudy sky. The overall image has a light, semi-transparent overlay.

# Agenda

- **Production Planning and Scheduling**
- **Inventory Management**
- **Servicing the Customer**
- **Synergy with all Departments**
- **Effective Communication**
- **Handling Quality Issues**



## Production Planning and Scheduling

- Sales and Production Meetings
- Knowledge
- Creating Production Schedules
- Following the Schedule
- Follow up



# Production Meetings

Who needs to attend?

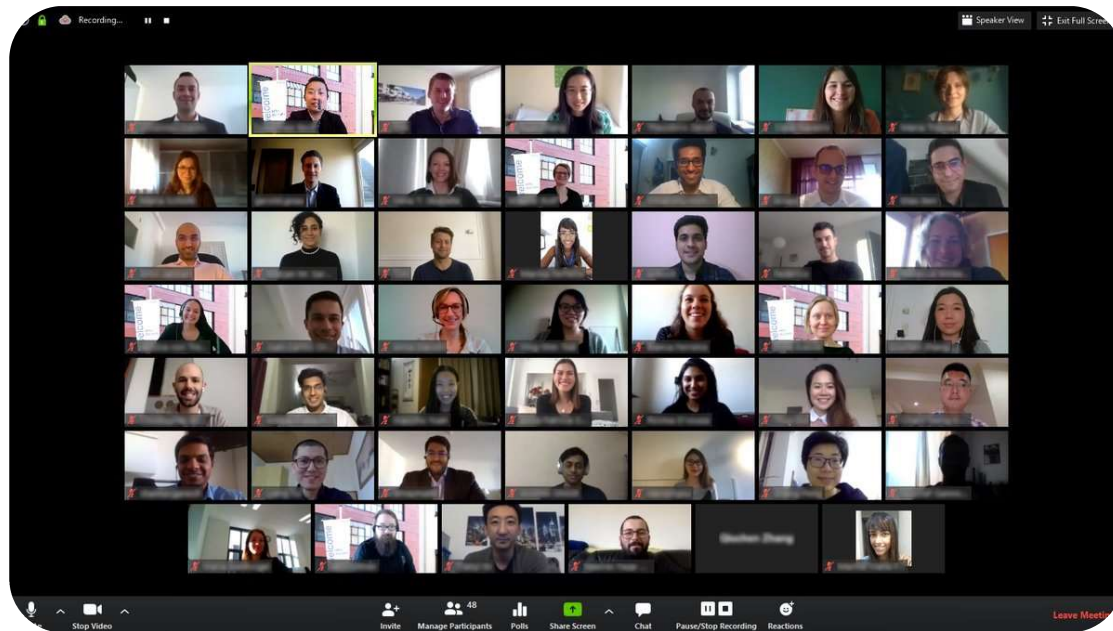
What will we discuss?

How often should the meetings be held?





# Sales and Production Meetings – Attendees



- Region Manager/VP
- General Manager
- Operations Manager
- Sales Managers
- Plant/Production Managers
- QC Managers
- Dispatchers
- Technical Promotions
- Business Analysts



# Production Meetings – What to discuss

- Maintenance Items
  - Machines that need service
  - Incoming parts and lead times
  - Upcoming scheduled maintenance
- Shipping Issues
  - Hot items and upcoming shipments
  - Any pipe not ready to ship and why
  - Gasket/lube check
- Quality
  - Concerns
  - Issues taking place



# Sales and Production Meetings – Agenda

- **Start with things that affect everyone**
  - Safety
  - Personnel
  - Corporate Directives
- **Area reports**
  - QC Issues
  - Production Issues
  - Sales Issues
  - Shipping Issues/upcoming projects



# Sales and Production Meetings – Frequency

- Production meetings
  - Plant specific meetings could be weekly
- Regional production meetings
  - Meetings involving all of the regional leaders could be weekly
- Specific meetings
  - It may be a good idea to schedule these
- Leader's meetings
  - Could be daily





# Knowledge – What to Know

- Know your market
  - When is your slow season?
  - What styles of pipe and box does your market prefer?
- Know the capabilities of your equipment
  - What sizes can your machine produce?
  - What is a good production day for your machine?
  - Are there any maintenance issues slowing you down?
- Know your crew
  - Do you know your individual employees' strengths and weaknesses?
  - Are your operators cross trained?
  - Are your employees happy doing what they're doing?



# Knowledge – What to Know

- **Know your times**
  - Mixer cycle time/maximum batch size
  - Machine cycle time/same for all sizes?
  - Crane cycle time
  - Curing time required before tip out
  - Tip out
  - Patching time for the day's production
  - Yarding time to put the pipe away
  - Changeover times





# Production Planning

## Creating a Production Schedule

- Plan what to run on what machine when
  - Does the equipment need to be transferred from another plant?
  - Do we have the correct wire to run? Spacers?
  - Is the 48 inch vibrator still at the repair shop?
- Things to keep in mind when scheduling
  - Upcoming holidays
  - Shipping forecast
  - Large Releases
  - Special Projects

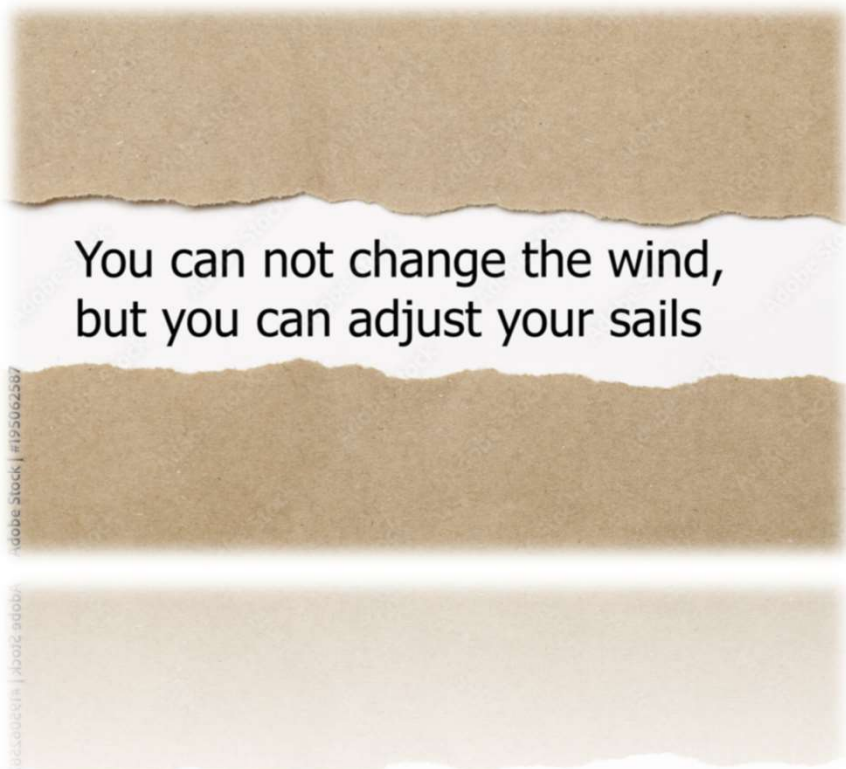




# Production Planning

## Following the Production Schedule

- The production schedule
  - Plan as far out as possible
  - Discuss with your team
  - Post the schedule conspicuously
- The unforeseen
  - Emergencies happen
  - Improvise, adapt, and overcome
  - Maintain composure and know that changes to the plan are inevitable



You can not change the wind,  
but you can adjust your sails

Adobe Stock | #195062587

Adobe Stock | #195062587

ρητ λουτ αν αβ]ηατ λουτ αβ]ητ  
του αν ηοτ ανηαητ ηητ ανητ



# Agenda

- ~~Production Planning and Scheduling~~
- Inventory Management
- Servicing the Customer
- Synergy with all Departments
- Effective Communication
- Handling Quality Issues
- Continuous Improvement

# Inventory Management

- WHAT TO PRODUCE
- HOW MANY TO PRODUCE
- SLOW MOVING INVENTORY
- PERIODIC CYCLE COUNTS
- RAW MATERIALS INVENTORY





# Inventory Management

## Raw Materials



- Raw Materials
  - Aggregate
  - Cementitious
  - Reinforcement
  - Patch material
- Miscellaneous Items
  - Gaskets
  - Mastic and primer
  - Miter splice plates



# Inventory Management

## Finished Product

- Determine what to keep in stock
  - Decide what your most popular sizes and classes are
  - Establish a good target inventory level
  - Use this to help plan your production schedule
- How many do you produce when you are running?
  - Know your problematic sizes
  - Know what runs well
- Pay attention to slow moving inventory
  - Can the product be downgraded and shipped?
  - Can it be slotted or mitered?



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- Servicing the Customer
- Synergy with all Departments
- Effective Communication
- Handling Quality Issues
- Continuous Improvement

# Servicing the Customer

- CUSTOMER SERVICE
- BEING A RESOURCE
- HANDLING ISSUES
- RELATIONSHIPS

A hand is holding a rectangular wooden sign. The sign has the text "A SATISFIED CUSTOMER IS THE BEST BUSINESS STRATEGY OF ALL" written on it in black, bold, sans-serif capital letters. The background of the sign is a light-colored wood grain. The hand holding the sign is visible on the left and right sides. The background of the entire image is a blurred grey and white, with a large teal triangle on the left side.

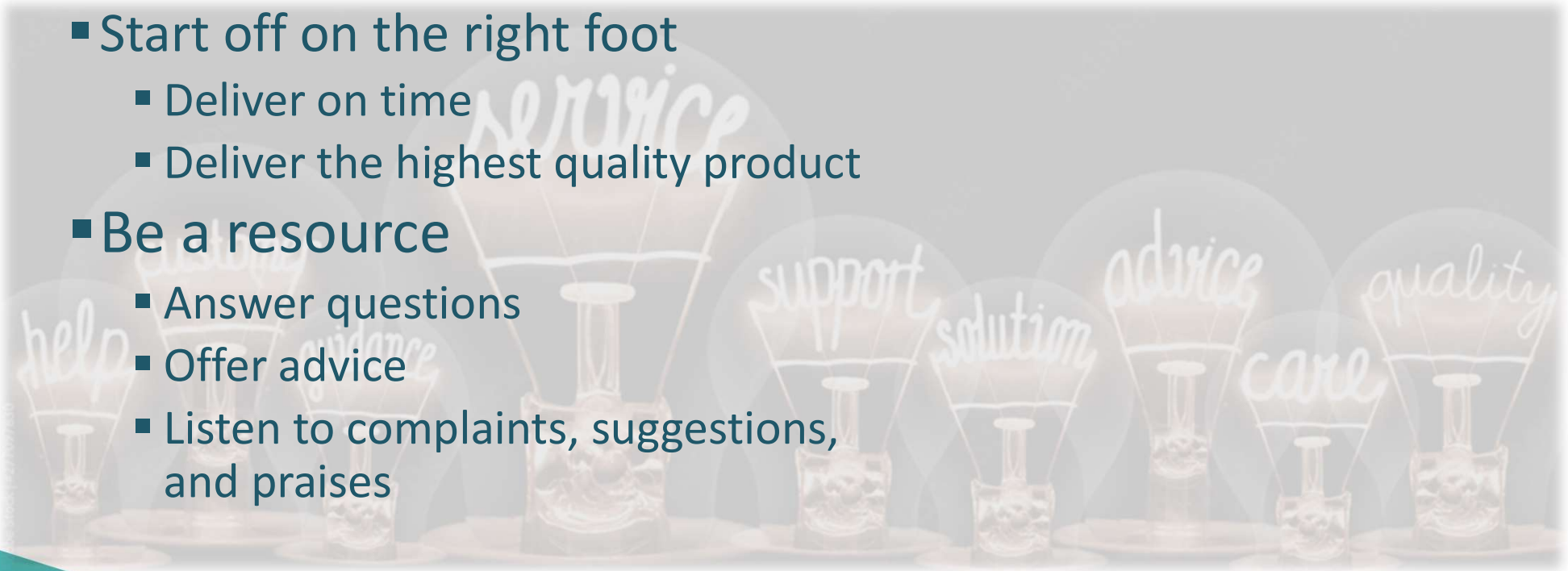
**A SATISFIED  
CUSTOMER**  
IS THE BEST  
BUSINESS  
STRATEGY  
OF ALL



# Servicing the Customer Front End

## ■ Customer Service

- Start off on the right foot
  - Deliver on time
  - Deliver the highest quality product
- Be a resource
  - Answer questions
  - Offer advice
  - Listen to complaints, suggestions, and praises





# Servicing the Customer Back End

- Customer Service
  - Dealing with issues
    - Investigate all reported issues
    - Correct any legitimate issues
    - ALWAYS involve the salesperson
  - Foster the relationship
    - Plant tours
    - Jobsite visits



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- Synergy with all Departments
- Effective Communication
- Handling Quality Issues
- Continuous Improvement



Coffee break...

10:00



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- Synergy with all Departments
- Effective Communication
- Handling Quality Issues
- Continuous Improvement



# Synergy Between Departments

---

- COMMUNICATION
- QUALITY CHECKS
- SALES DEPARTMENT
- SHIPPING



“The way a team plays as a whole determines its success. You may have the greatest bunch of individual stars in the world, but if they don’t play together, the club won’t be worth a dime.”

- BABE RUTH



# Synergy Between Departments Communication

- During production
  - Machine operators
  - QC feedback
- Post production
  - QC feedback
  - Patching/Yarding
  - Shipping



# Synergy Between Departments Quality Checks



- Hourly checks
  - Performed by employees
  - When there is an issue
  - Trust but verify
- Quality issues
  - Responding
  - Correcting
  - Communicating



# Servicing the Customer

- Special projects
  - Class 4 or 5
  - Wyes or tees
  - Anything out of the ordinary
- Upcoming releases
  - Hot items
  - Miters or flared end
  - Slow shipping

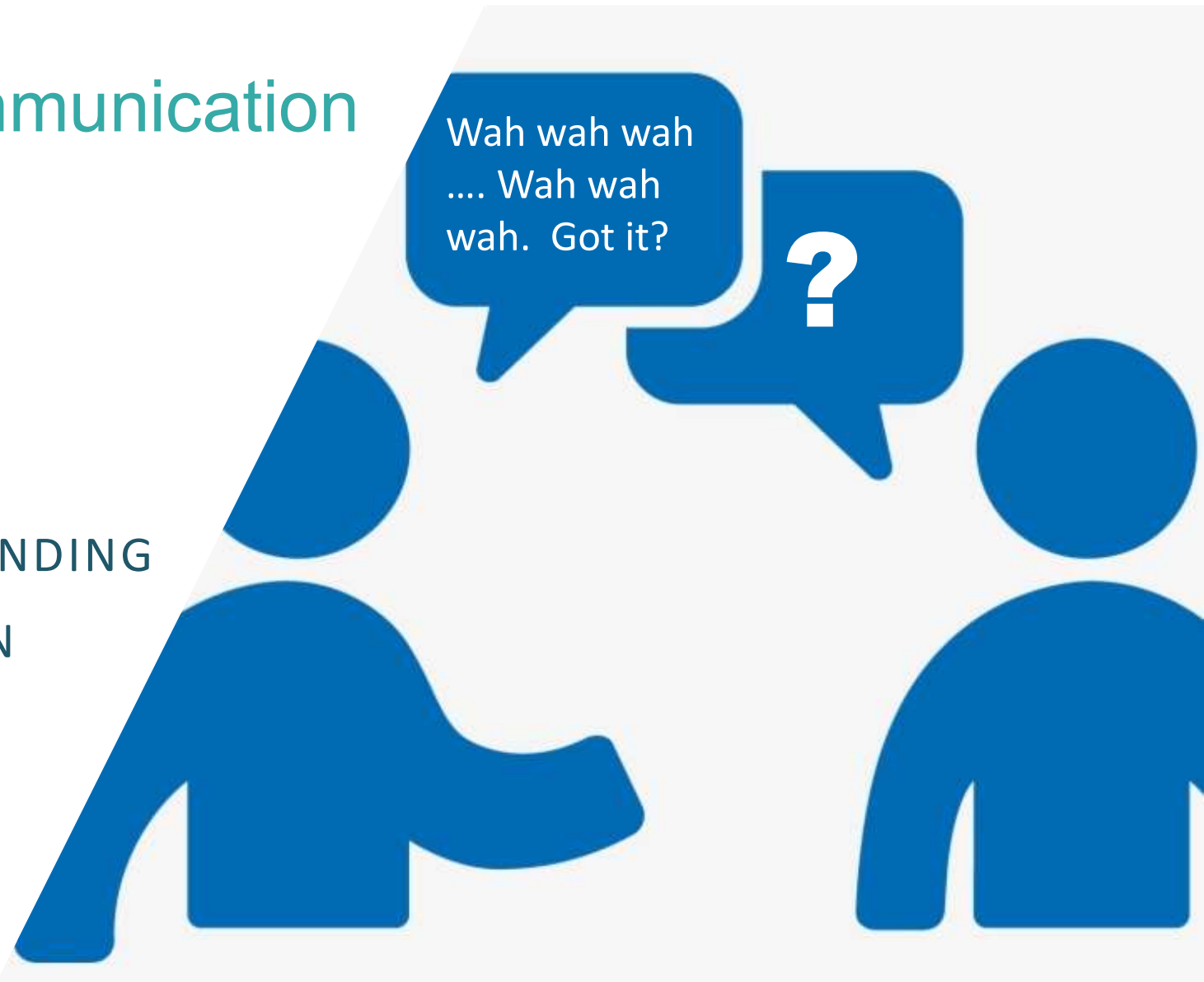


# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- ~~Synergy with all Departments~~
- Effective Communication
- Handling Quality Issues
- Continuous Improvement

# Effective Communication

- KNOWING YOUR AUDIENCE
- BEING CONCISE
- GAIN UNDERSTANDING
- LEARN TO LISTEN



# Effective Communication

## Know your Audience

- Employees
  - Speak the “pipe language”
  - Be clear and to the point
  - Do not leave room for interpretation
- Customers
  - Do not always speak the “pipe language”
  - Actively listen and address concerns
  - Answer questions thoroughly





# Effective Communication

## Being Concise

- Plan what you will say
- Use specific examples
- Avoid over-explaining
- Avoid filler words



# Effective Communication

## Know your Audience



- Speak in terms that are understood
- Repetition
- Ask questions
- Have them repeat back to you



# Effective Communication

## Learn to Listen

- Actively listen
- Reflect the information back
- Body language
- Consider what is being said





## Communication Exercise

- Split into 2 equal groups and choose a leader
- Leaders will receive a bag of parts and instructions
- You have 5 minutes







## Communication Exercise

- Split into 2 equal groups and choose a leader
- Leaders will receive a bag of parts and instructions
- You have 5 minutes

00:00





## Communication Exercise (Round 2)

Keeping the same groups, leaders will get a second bag

Remove the items from the bag and put them together

Only the leader can look at the drawing

Leader cannot touch the pieces

You will have 5 minutes







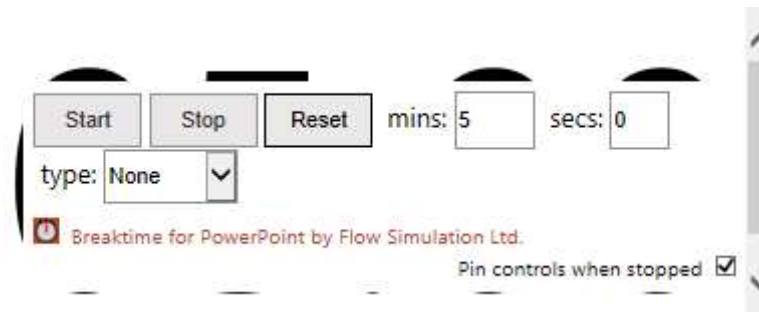
## Communication Exercise (Round 2)

Keeping the same groups, leaders will get a second bag

Remove the items from the bag and put them together

Leader cannot touch the pieces

You will have 5 minutes





What was different between the rounds?

Which conditions would you rather work in?





# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- ~~Synergy with all Departments~~
- ~~Effective Communication~~
- Handling Quality Issues
- Continuous Improvement

# Quality Issues

- RESPONSE
- REACTION
- DEGREE
- MOVING FORWARD





# Quality Issues

## How to avoid

- Don't make bad pipe.



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- ~~Synergy with all Departments~~
- ~~Effective Communication~~
- ~~Handling Quality Issues~~
- Continuous Improvement



# Quality Issues Response and Reaction

- Quality issues will happen
  - Bad batches
  - Machines breaking down
  - Human error
- Our reaction is what's important
  - Fix the root cause
  - Educate the crew
  - Put steps in place to avoid repeats



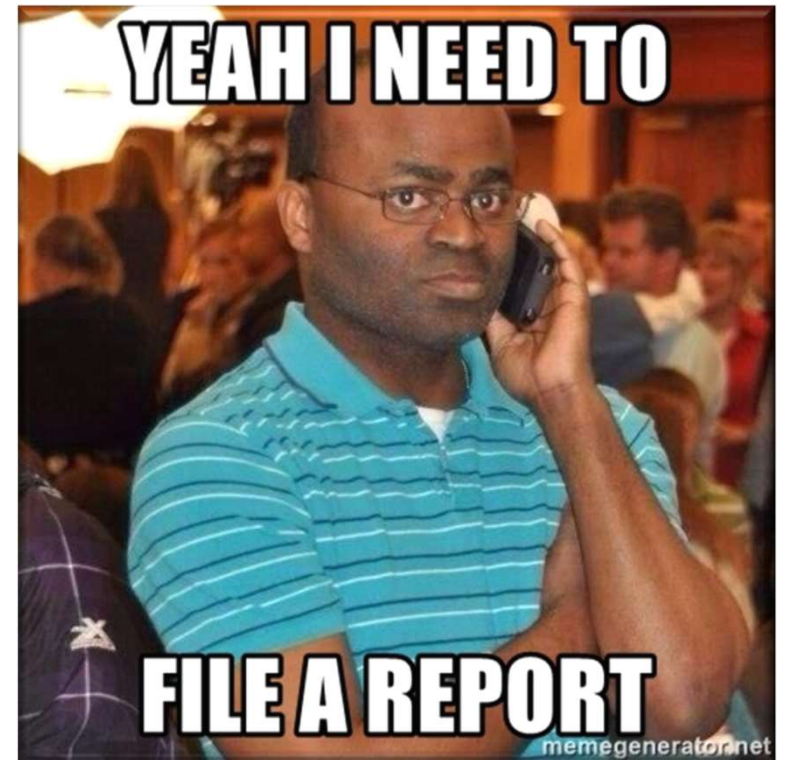
# Quality Issues



- Minor vs major
  - Bleed out, drag marks
  - Cracks, voids
- Determine what can be fixed
  - Know your specifications
    - ASTM/AASHTO
    - QCAST
    - DOT
    - Local counties and municipalities
  - Know your patch crew

# Quality Issues Recording

- Report the issue
  - Don't hide quality issues
  - Know who to report the issues to
- Document
  - Daily forms
  - Major repair records



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- ~~Synergy with all Departments~~
- ~~Effective Communication~~
- ~~Handling Quality Issues~~
- Continuous Improvement



**YOU CAN NOT  
INSPECT QUALITY  
INTO THE PRODUCT;  
IT IS ALREADY  
THERE.**

W. Edwards Deming



# Continuous Improvement

- YOUR CREW
- OWNERSHIP
- CULTURE
- GOALS
- EFFICIENCY KILLERS

Your systems are perfectly designed to get the results that you are getting.

Stephen R. Covey

[quote fancy](#)



# Continuous Improvement Building a Crew

- Bulletproof your crew
  - Crosstrain
    - Know your key positions
    - Seasoned employees should be able to work most positions in their area
    - Never let one or two employees being out shut down the operation
  - Instill ownership
    - Operate the plant like your name is on the sign
    - Push your employees to own their equipment





# Continuous Improvement Culture

- Build a CI culture
  - Engage the employees
    - Push the culture
    - Get ideas
  - Preventive maintenance
    - Preventive vs reactionary
    - Parts on hand
    - Use tools to track routine maintenance
  - Waste eradication
    - TIMWOODS
    - Always be on the lookout for wastes







### Transport

Unnecessary movements of products or materials



### Motion

Unnecessary movements of people / walking



### Overproduction

Making more than the next process needs



### Defects

Efforts caused by rejects, rework, returns

# T I M W O O D S



### Inventory

Excess raw materials, work in progress or finished goods



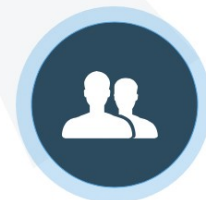
### Waiting

Wasting time waiting for parts or another process



### Over Processing

Unnecessary steps or processing



### Skills

Under utilizing people's talents, skills and capabilities

© 2020 Leanscape.io // All Rights Reserved.



# Continuous Improvement Goals

- Set realistic production goals
  - Attainable
  - Sustainable
  - Measure and track
- Efficiency Killers
  - Constant design changes
  - Poor quality
  - Excessive changeovers



# Agenda

- ~~Production Planning and Scheduling~~
- ~~Inventory Management~~
- ~~Servicing the Customer~~
- ~~Synergy with all Departments~~
- ~~Effective Communication~~
- ~~Handling Quality Issues~~
- ~~Continuous Improvement~~

Questions?  
Comments?



## **Operations Management**

Chris Sampson & Israel Cedillo

Rinker Materials Concrete Pipe - Florida