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**Timeline:** January - June 2014 (Kaizen Event week of March 10<sup>th</sup>, 2014)

SOLVE			
<b>What is the Gap?</b> <a href="#">1. Starting Point</a> <a href="#">2. Vision</a> <a href="#">3. Current State</a>	<b>What is the Goal for Improvement?</b> <a href="#">4. Goal or Target Condition</a> <a href="#">5. Customers &amp; Beneficiaries</a> <a href="#">6. Benefit</a> <a href="#">7. Measures &amp; Targets</a> <a href="#">8. Conditions</a>	<b>What is the Approach?</b> <a href="#">9. Team Members &amp; Roles</a> <a href="#">10. Project Schedule</a> <a href="#">11a. Data and Information Collection</a>	<b>What are your Conclusions?</b> <a href="#">13. Improvement Hypotheses &amp; Problem Solving Summary</a>
SOLVE		TRY, LEARN, INSTALL	
<b>Understanding the Problems:</b> <a href="#">11b. Current and Future State Process Maps</a> <a href="#">12. Cause and Effect Diagram</a>		<b>Try Solutions; what did you learn?</b> <a href="#">14. Construct &amp; Execute tests</a> <a href="#">15. Document Results</a> <a href="#">16. Analyze Results &amp; Extract Learning</a>	<b>How will you make the new way happen?</b> <a href="#">17. Plan Rollout &amp; Execute</a> <a href="#">18. Measures of Success</a>
SOLVE			

## 1. Starting Point

- a. **What is the need (e.g. outcome) or gap that caused this project to be considered in the first place?**

A new Ages & Stages Questionnaires™ (ASQ-3) childhood developmental screening site was unveiled in July 2013, located at the Fond du Lac County Women, Infants and Children (WIC) office. The site offers all parents of children ages 2 months to 5 years the opportunity to select age-appropriate screening questionnaires to be completed and returned to the health department. Completed questionnaires received are scored, and parents are notified of results, provided activities to do with their child, and given recommendations for follow-up.

Since the initiation of the screening site, (1) 29% of the screens returned were “invalid” and (2) on average only 5 screens were returned per month. As a result, inappropriate referrals were made to Birth to 3, and the validity of the screen results of children that scored in the “above cut-off” range when the wrong screen was used was questioned.

- b. **Who is establishing the need?**

MCH Supervisor (owner of the ASQ-3 screening process at FDL HD) identified the gap

- c. **How is the need being measured and is it possible for this project to make an impact on that measure?**

MCH Supervisor maintains a log:

- (1) At the end of the process upon entering into SPHERE database the screen is flagged as invalid
  - (2) Number of screens received total
- FDL HD has the ability to impact both of these measures.

**d. What data or analysis was used to establish that this project will make a key impact?**

- Data collected of number of screens received from Jun 2013 – Sep 2013
- % of invalid screens
- number of screens taken vs. received was collected in Feb 2014

**e. What scope (e.g. geographic, organization, customer) are you expected to impact?**

This project has the potential to impact all children birth to 5 years of age in Fond du Lac County, especially those enrolled in WIC (approx. 1600 children Birth-5 years of age enrolled in WIC)

**f. What conditions are being placed on this project?**

- WIC appointment times are not increased

**2. Vision** (What do you want to achieve in the long range and without any restrictions? *Generate a picture or description of your ideal condition.* How will it look for the customers, our team, and for the taxpayers/funding sources?)

All parents with a child Birth-5 years who present to the HD recognize the screening site, correctly choose the correct screen for their child, and complete and return the screen to the HD within the required timeframe.

Ideally the parent either chooses the correct screen on their own, or knows who to go to for assistance in choosing the correct screen for their child. The screen then needs to be completed while their child is still in the age range indicated on the screen, and then returned to the Health Department for scoring.

We would like to offer this screening tool to parents with a child Birth-5 years who present to the HD, or Child Support to identify those who need to be referred for further assessment for developmental delays.

If interventions are delayed until the child is in preschool or later, the overall cost to treat the child increases as more partners will be involved. Choosing the correct screen initially will mean less time spent by the MCH supervisor, and the parent. Developing a flawless, efficient system is being responsible to the taxpayers.

**3. Current State** (Description of how the process and organization is operating now; Quantitative if possible, always factual and based on observation)

Stakeholder	Description	How do you know? (Data if available)
Customers	<ul style="list-style-type: none"> <li>• Most parents of children birth-5 years are invited to participate in the ASQ-screen during their WIC visit</li> <li>• Screens for those Birth-33 months are sent to Birth-3 Program Director</li> <li>• Parent goes to display with the questionnaires and choses the one they think is appropriate for their child based on their age and the range each questionnaire applies to. Parent may not select the correct screen for their child's age.</li> <li>• Parent takes the screen home and completes it with their child and then mails it back to the Health Department. Parent may not complete and return the screen in time to ensure validity, or at all.</li> <li>• Questionnaires are entered into the SPHERE database; invalid screens are flagged</li> <li>• If parents have already been referred to services and the screen was invalid the parent must be called and asked to complete the correct screen</li> </ul>	<p>June 2013-Sept 2013: Ave. 5 screens returned / month; 1200 seen at WIC</p> <p>7/1/13-9/30/13: 14 screens were completed; four of them were invalid; one was lost</p> <p>Month of Feb 2014: 33 screens taken, 2 completed</p> <p>Jan 2014: 10 feedback forms sent out to parents;</p>

		zero returned
Financial	<ul style="list-style-type: none"> <li>Activity of the Title V Grant</li> <li>Birth-3 "Child Find" requirements met</li> <li>Potential for funding through coalition</li> </ul>	
Your Team	<ul style="list-style-type: none"> <li>Process owner is in the MCH program and most of the parents using the screens are presenting to the Health Department for their WIC visits.</li> </ul>	

#### 4. Goal or Target Condition (What is the objective? Which piece of the gap are you addressing?)

By March 14th, 2014, we will reduce the number of invalid ASQ-3 developmental screens for those Birth-60 months from 29% to 0%; increase the number of screens completed from 5 to 10 per month by April 30, 2014.

#### 5. Customers and Beneficiaries (Who benefits from achieving the goal? What populations are targeted?)

- Children birth to 5 years residing in FDL County
- FDL County Health Department staff
- Birth to 3 Staff

#### 6. Benefit (What are the benefits from achieving the goal?)

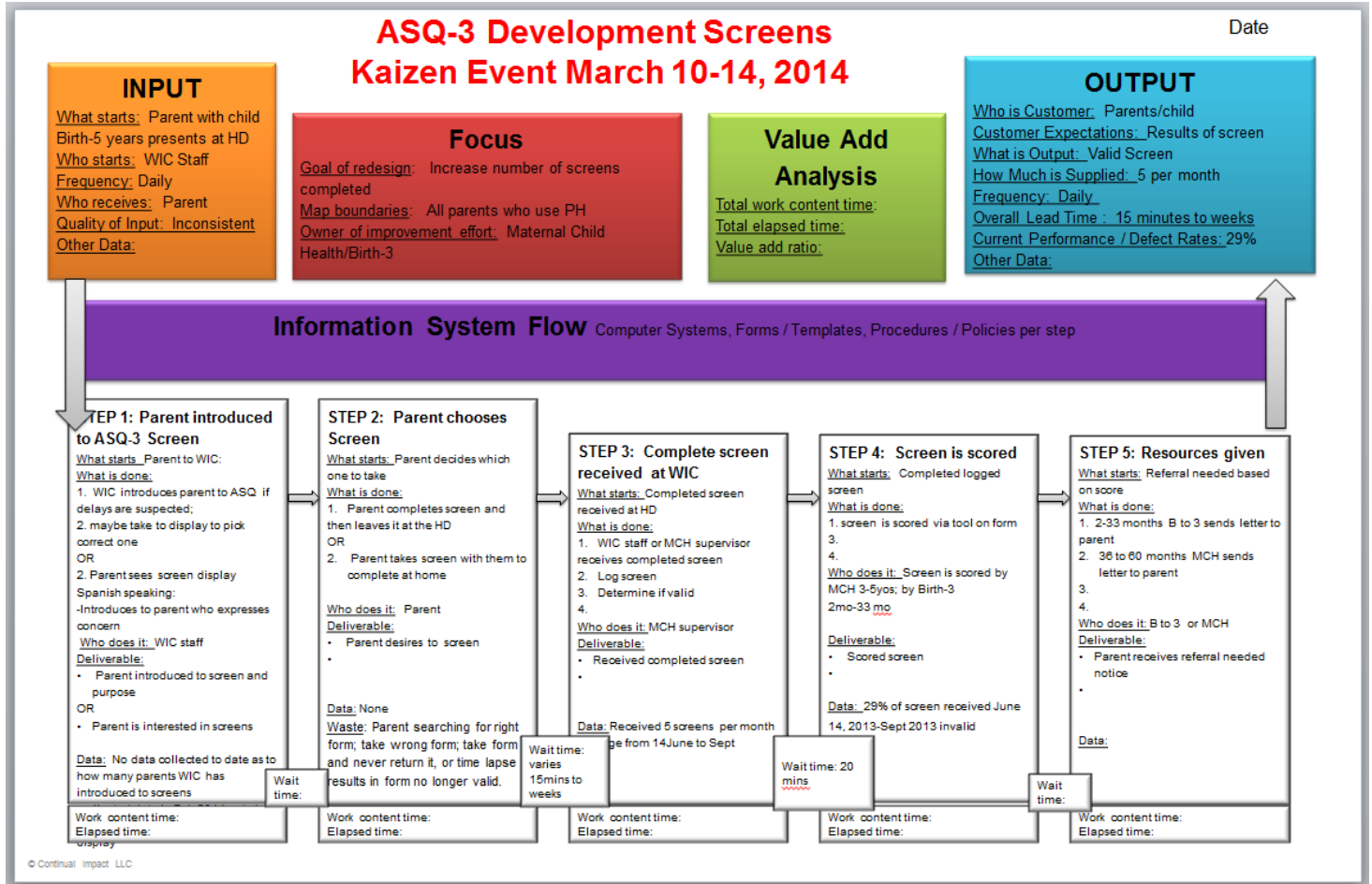
SO THAT: Developmental delays will be identified correctly and referrals are appropriate. Children will then receive appropriate further assessment/early interventions thereby improving school readiness. Process will be improved and then able to be utilized to offer ASQ-SE in 2015.

#### 7. Measures and Targets (What quantitatively will be achieved?)

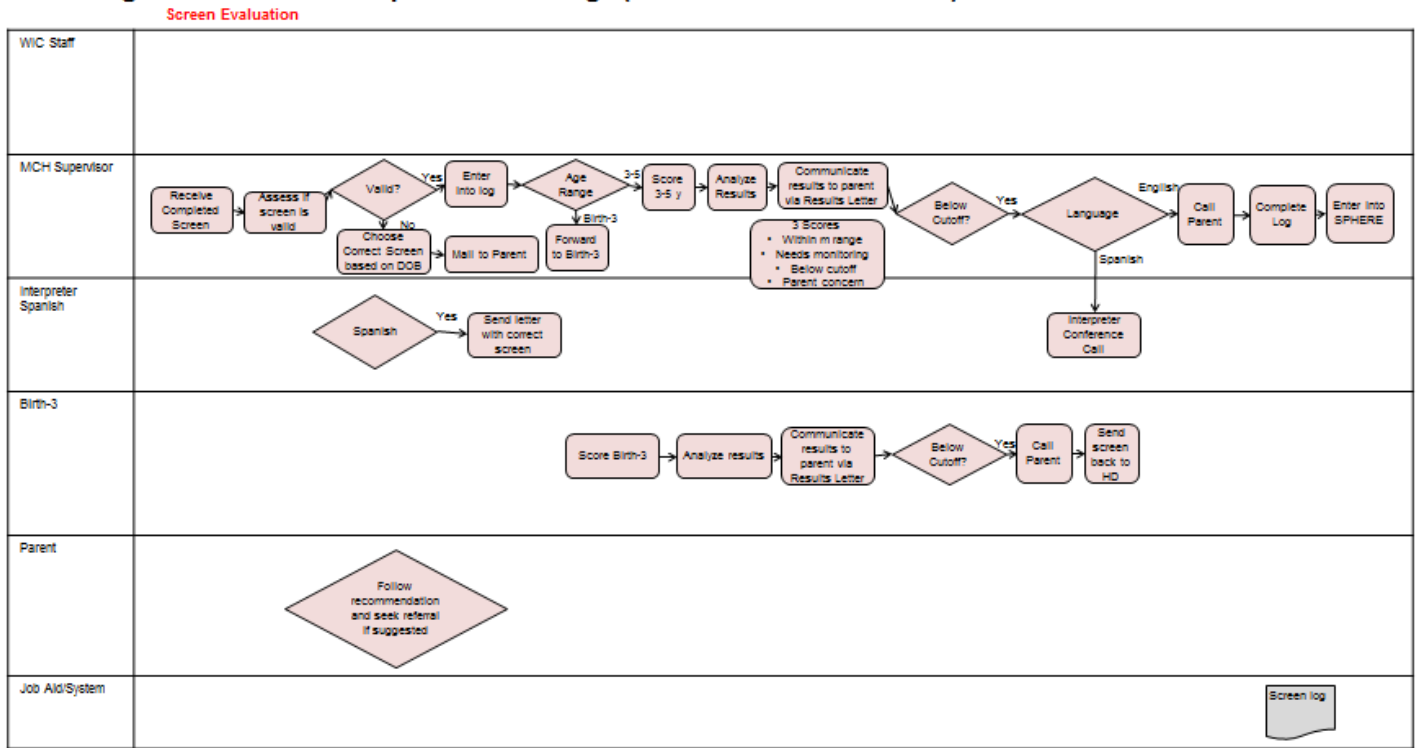
Beneficiaries	What Measured	How Measured	Target
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#### 11a. Data and Information Collection (What will you collect? Who? When?)

WHAT	WHO	WHEN
Number of screens received vs. number returned to Health Dept	Jean	Month prior to event
Feedback from parents who have completed screens	Jean	Month prior to event
Feedback regarding display-ease of use; clarity of intended users	Team	Kaizen Event; Post event
Number of screens received vs. taken	Jean	Ongoing Monthly
Number of screens invalid	Jean	Ongoing Monthly



Increasing ASQ-3 Child Development Screenings (Current and New Process)



12. Conduct Cause and Effect Analysis (Priority issues and solutions from Cause and Effect Analysis)

Issues/Wastes (pink/orange)	Root Causes (blue)	Solutions or Additional CI Methods to use (lime green)	Speed and Cost to Implement
Select wrong screen (parent and/or FDL staff)	Directions at screen display do not provide all key info needed (age range in months & days, prematurity)	<ul style="list-style-type: none"> <li>Update directions at display to clearly provide all key info needed to select correct screen</li> <li>Put age criteria on front of holder for each age group</li> </ul>	(1) High speed, Low cost
	Mistakes made when calculating age range	<ul style="list-style-type: none"> <li>Provide instructions on how to find/use ASQ-3 age calculator with their smartphone</li> </ul>	(1) High speed, Low cost
		<ul style="list-style-type: none"> <li>Mount iPad on wall for parents to access ASQ-3 age calculator</li> </ul>	(2) Low speed, Higher cost
	<ul style="list-style-type: none"> <li>Train WIC And HD front desk staffed on using ASQ-3 age calculator on website</li> <li>Have staff assist using ASQ-3 age calculator</li> <li>Direct parents to Health Department desk for assistance</li> </ul>	(1) High speed, Low cost	
Parent takes too long to complete screen	<ul style="list-style-type: none"> <li>Include in directions to return completed screen while child is in age range</li> <li>Put label on envelope with 3 questions               <ol style="list-style-type: none"> <li>Did you sign?</li> <li>Child in age range?</li> <li>Complete?</li> </ol> </li> </ul>	(1) High speed, Low cost	

## PROJECT TEAM PROBLEM SOLVING

	Screen for their child is in wrong slot	<ul style="list-style-type: none"> <li>Put cover sheet on back of slot to error-proof putting in wrong slot</li> <li>Bi-weekly stock check by Process owner</li> </ul>	(1) High speed, Low cost
Parents don't take a screen	Parents don't notice the screen display <ul style="list-style-type: none"> <li>Area cluttered</li> <li>Does not attract them to the display</li> <li>Easy to walk by</li> </ul>	<ul style="list-style-type: none"> <li>Move other resources to de-clutter space around display</li> <li>Redo screening display with banner, the words "free service", and border around display</li> <li>Footsteps leading to screens</li> <li>Re-do waiting area chair layout to make more space and guide parents to display</li> <li>Change up the site / something new on a routine basis</li> </ul>	(1) High speed, Low cost
	Parents don't know what to do	<ul style="list-style-type: none"> <li>Provide more clear directions</li> <li>Provide ability for parent to ask question to an actual person</li> </ul>	(1) High speed, Low cost
	Parents do not know about screens or understand purpose & benefits <ul style="list-style-type: none"> <li>Display does not indicate target audience</li> <li>WIC staff does not promote screens</li> <li>No outside marketing</li> </ul>	<ul style="list-style-type: none"> <li>Update display to more clearly indicate purpose, benefits, and target audience</li> </ul>	(1) High speed, Low cost
		<ul style="list-style-type: none"> <li>Put bookmarks in more visible area</li> <li>Post "bathroom readers" in stalls to explain process and benefits</li> </ul>	(1) High speed, Low cost
		<ul style="list-style-type: none"> <li>Process owner give presentations to HD staff on process and benefits at staff meetings</li> <li>Have staff explain ASQ and assist in selecting</li> <li>Develop consistent "introduction" to screening process (speech)</li> </ul>	(1) High speed, Low cost
		<ul style="list-style-type: none"> <li>Outside marketing: <ul style="list-style-type: none"> <li>Press releases</li> <li>Facebook</li> <li>Health Fairs</li> <li>Posters</li> <li>Open House</li> </ul> </li> </ul>	(2) Low speed, Higher cost
	It is not clear that screens are provided in both English and Spanish <ul style="list-style-type: none"> <li>Only tabs visible say Spanish</li> <li>Only screens visible are English</li> </ul>	<ul style="list-style-type: none"> <li>Update display to make both English and Spanish tabs visible</li> <li>Provide title and instructions in both English and Spanish</li> </ul>	(1) High speed, Low cost
	Screen for their child is out of stock	<ul style="list-style-type: none"> <li>Bi-weekly stock check by Process owner</li> </ul>	(1) High speed, Low cost
Parents do not want to screen child <ul style="list-style-type: none"> <li>Negative connotation ("mental", gov't agency, judgment on parenting, associated with WIC)</li> <li>Concern about process and who will get results</li> <li>Lack of incentives</li> </ul>	<ul style="list-style-type: none"> <li>Promote benefits of screening</li> <li>Provide information on how long it takes to complete a screen</li> <li>Provide information on follow-up process and who gets the results</li> </ul>	(1) High speed, Low cost	

## PROJECT TEAM PROBLEM SOLVING

	<ul style="list-style-type: none"> <li>• Don't think they have time</li> </ul>		
	Parents already completed a screen and do not know they can re-screen at a later age	<ul style="list-style-type: none"> <li>• Educate parents that screening is just a "point in time" and there can be future developmental concerns</li> <li>• Post Assoc of Ped recommendations for frequency of screening big, on wall</li> </ul>	(1) High speed, Low cost
Parent takes screen but does not return to HD	Did not take envelope for mailing it back	<ul style="list-style-type: none"> <li>• Attach envelope with postage to screen</li> </ul>	(1) High speed, Low cost
	May not have all the materials at home to complete the questions	<ul style="list-style-type: none"> <li>• Provide materials and support for parents to complete screen in the health department</li> </ul>	(2) Low speed, Higher cost
	Do not know how to complete screen (questions unclear, literacy issues)	<ul style="list-style-type: none"> <li>• Provide a take-home instruction sheet (put inside envelope)</li> <li>• Provide contact information for help in completing</li> </ul>	(1) High speed, Low cost
		<ul style="list-style-type: none"> <li>• Have staff member assist parent with completing the screen</li> <li>• Make an appointment with the family to complete the screen</li> </ul>	(2) Low speed, Higher cost
	Lost it; wait too long to complete and then child is out of age range on the screen they took	<ul style="list-style-type: none"> <li>• Include in directions to return completed screen while child is in age range</li> <li>• Put label on envelope with 3 questions               <ol style="list-style-type: none"> <li>1) Did you sign?</li> <li>2) Child in age range?</li> <li>3) Complete?</li> </ol> </li> </ul>	(1) High speed, Low cost







## 13. Improvement Hypothesis (Summary of potential means to achieve goal)

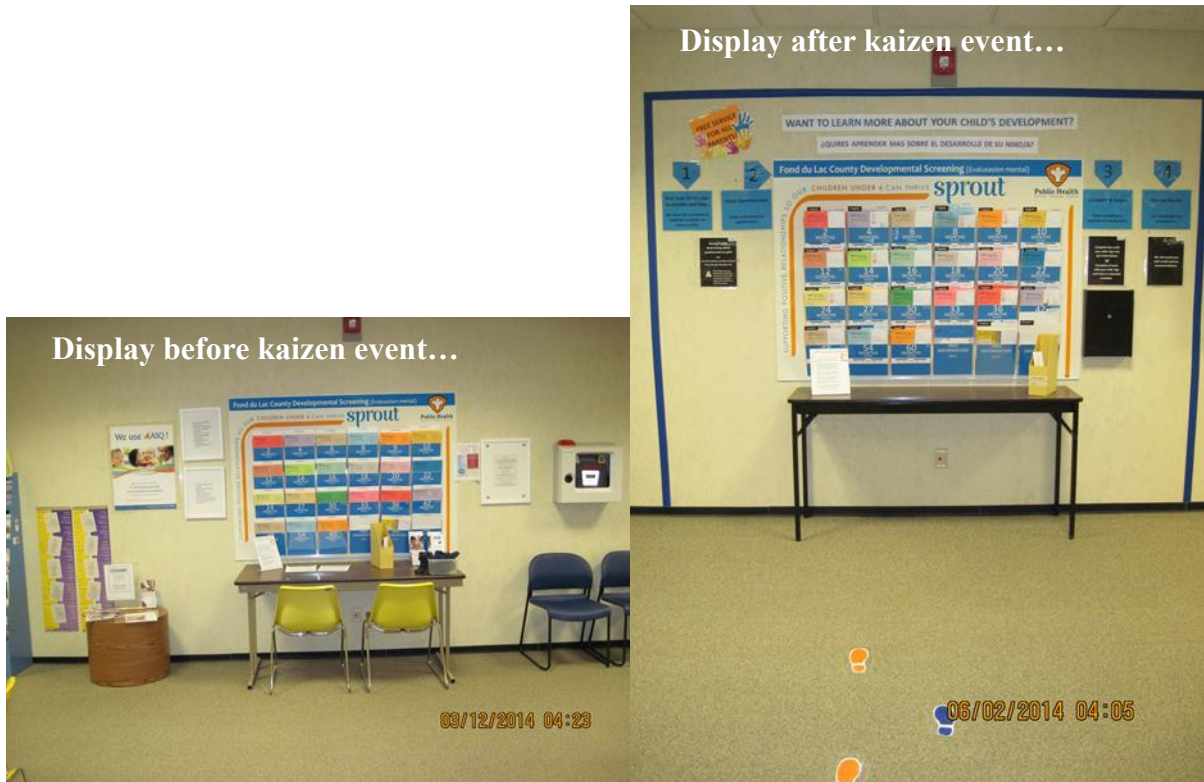
Issue	Improvement	Expected Results
Select wrong screen (parent and/or FDL staff)	IF we improve the instructions at the screening display on how to select the correct screen, including instructions for parents to use the online ASQ-3 Age Calculator on their smartphone	THEN parents will more often select the correct screen.
	IF we train WIC And HD front desk staff on using ASQ-3 age calculator on website, have them assist using ASQ-3 age calculator, and direct parents to Health Department desk for assistance	THEN parents will more often select the correct screen.
	IF the process owner conducts bi-weekly checks of the screen display...	THEN there will always be sufficient screens available in the correct slots.
Parents don't take a screen	IF we redesign the display with better visuals and directions (incl. benefits of screening), de-clutter the area, update display to make both English and Spanish visible, provide the ability for parents to ask questions to an actual person, and put footprints on the floor...	THEN more parents will recognize the display and go to it, understand what & who it is for and the purpose / benefits / process, and will subsequently take more screens.
	IF we train WIC And HD front desk staff on the screens, post bathroom readers, and move the bookmarks to a more visible place...	THEN more parents will learn about the screening process and benefits, and will take more screens.
	IF we conduct outside marketing to promote screening (press releases, Facebook, health fairs, posters, Open House)...	THEN more parents will learn about the screening process and benefits, and will take more screens.
Parent takes screen but does not return to HD	IF we attach envelopes with postage to screens, provide a take-home instruction sheet (put inside envelope), provide contact information for help in completing, and put labels on envelopes with 3 questions (Did you sign?, Child in age range? Complete?)...	THEN more parents will return completed screens to the HD for scoring (ratio of screens taken to screens returned will increase).

## TRY

## 14. Test Hypotheses (How will you test the potential solutions? Update the project schedule for trial and learning)

Tests	How	When	Who	Successful if...
<b>1. Recognizing screens and understanding the who/what/why/how:</b> Implement suggested changes to display, instructions, and display area/waiting room. Then re-test to see if people can better determine what the screens are for and how to use them.	Interview county staff on display after changes are made (conduct same interview as on Day 2 of Kaizen event)	Day 4	All	Those interviewed can indicate who the screens are for; how to complete the process; what the benefit of completing the screen is
<b>2. Selecting the Correct Screen:</b> Implement suggested changes to instructions. Then re-test to see if people can more often select the correct screens.	Have county staff choose screens for 2 ages. Take to display and ask them to choose the screen (same test as on Day 2 of Kaizen event)	Week after K week	Lily	All people choose the correct screens
<b>3. Number of screens returned for scoring:</b> Implement all selected action items for taking and returning screens,	Count number of screens at beginning and end of each month and record in log. Post on Continual Improvement System chart.	Monthly	JW	At least 10 completed screens are returned per month (100% increase in current rate)

then track the number of screens taken and returned.				
<b>4. Number of valid screens returned:</b> Implement all selected action items for selecting the right screens, then track the number of screens returned for scoring which are valid.	During scoring of returned screens, determine if valid and record in log. Post on Continual Improvement System chart.	Score as received; Post on CIS monthly	JW	100% off screens returned are valid



**15. Results:** attach graph/table of actual trial performance

Tests	Actual
<b>1. Recognizing screens and understanding the who/what/why/how:</b>	☺ After the display renovation all those interviewed were able to indicate who the screens are for; how to complete the process; what the benefit of completing the screen is
<b>2. Selecting the Correct Screen:</b>	☹ After the detailed age span, and instructions were added to the display those interviewed were still not able to choose the correct screens.
<b>3. Number of screens returned for scoring:</b>	☺ ☹ The number of screens returned reached our goal of 10 the first month post the changes. The next month is dropped to 8.
<b>4. Number of valid screens returned:</b>	☹ First and second month post event the percentage invalid increased to 30% and 37% respectively.

## LEARN

**16. Learning** (For the trials, what worked and did not, why and what are you doing as a result? Is the result repeatable?)

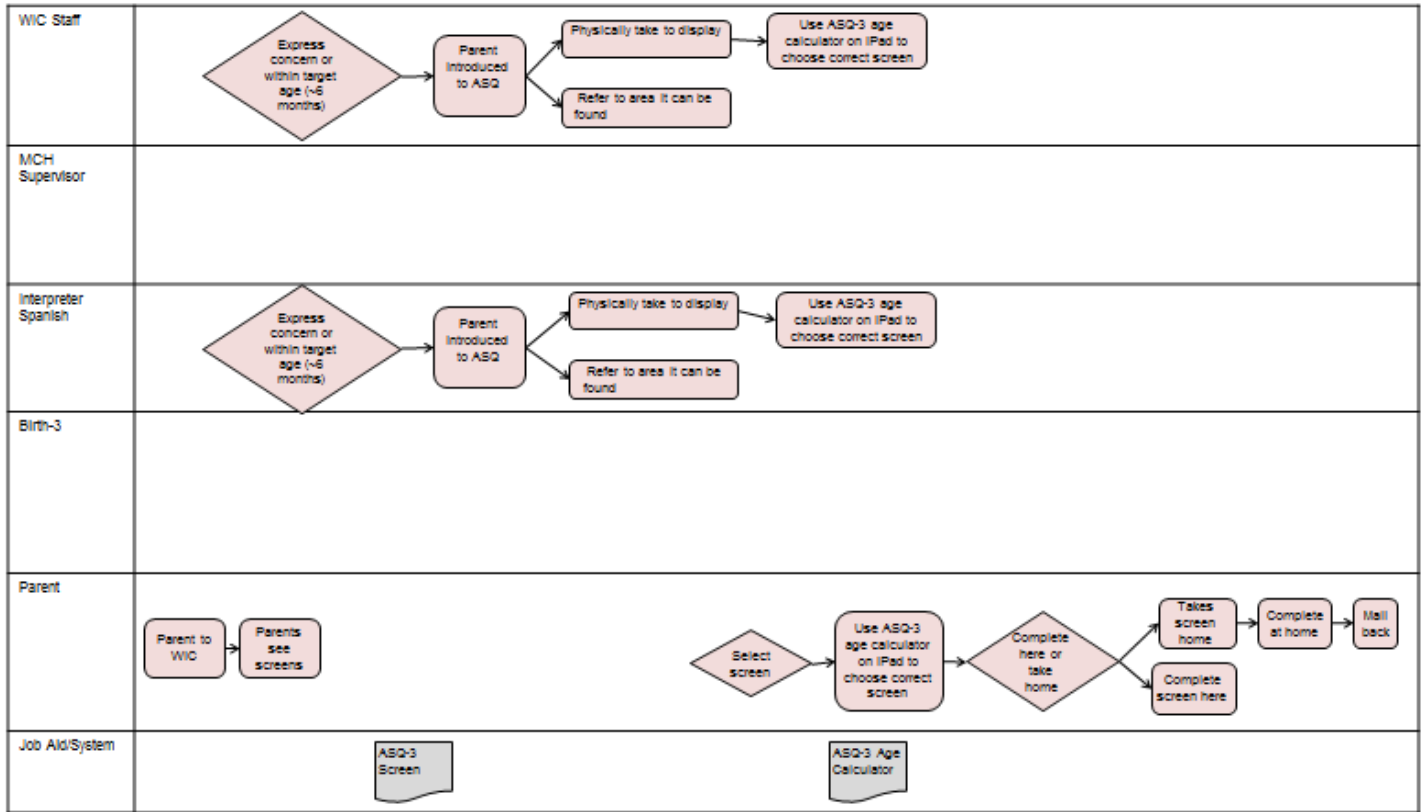
Reasons Why solution worked/not	Learning: Why?	Direction: Actions to be taken
1. The banner at top of the display assisted to clearly indicate the intended user and purpose	Display needed more information that described the purpose of the items in that common area.	None
Arrow on the English instructions made it seem like Spanish instructions were to the right of the display instead of on the reverse side.	Arrow points to the right	Change arrow to "Atras" /back
2. Even with the improvements made (clearer instructions, better labelling) it is difficult to mentally do the math and choose screen in the appropriate age range, especially if it's not your child	It appears the age calculator is an absolute requirement for being able to choose the correct screen at a self-serve site, therefore necessary to post at the display; or direct parent to always seek assistance from someone who also has access to the website..	Mount iPad on wall with ASQ-3 calculator. Birth-3 has iPad that they will donate to be mounted on the wall by the display. Patrons will be able to use the ASQ-3 Calculator at the site.
3. Information provided at the display indicates the intended user and the benefits in completing a screen; self-addressed stamped envelopes provided. Footsteps leading to the display are attractive to the children—they follow the footsteps, the parents follow the kids.	Providing an envelope attached to the screen made it easier for the parents to return the screens and assured that parent always took an envelope.	None
4. Scoring screens to strictly for validity  Screens returned after child is out of age range because parents do not realize time sensitive nature of the screens when they take them.	Even though screens are out of the age range they still hold valuable data and can be considered valuable.  Need to clearly indicate that the screens are time sensitive.	Owners of the process will meet and determine definition of valid screen based on best practices of screen users and developers.  Stamp screens with: <b><i>Date taken:_____</i></b> <b><i>Return in stamped envelope within 2 days</i></b>

**INSTALL**

**17. Installation Plan** (Steps to operationalize the new process and make it stick. Attach new process map below.)

**Increasing ASQ-3 Child Development Screenings (New Process)**

**Screen Submission and Completion**



What	Who	Deliverable	By When
Mount iPad at display	Jean/Kay	iPad mounted at display with access to ASQ-3 Age Calculator Tool	End of June
Marketing effort for Sprout	WIS.NET with SPROUT	Market plans-PSA's; printed materials; press releases	in
Put "on reverse" on directions so it's clear where the Spanish directions are located.	Lily	Make labels with label maker and a fix to the directions	30-May-14
Have a stamp made that indicates the date that the screen was taken and how long they have to complete it.	Jean	Put label/stamp on screen Date Taken: Return within (one week)	30-May-14
Evaluate parameters of an invalid screen	Jean/Diane	Buffer period identified in which screens will be accepted even though the child is out of the age range on the screen. This will assist with increasing our validity rate.	30-May-14

18. Measure Success

Measuring success over time.

This is a photo of our CIS chart that is posted in a public area for all staff to add their input on to.



Outcomes since the event:

