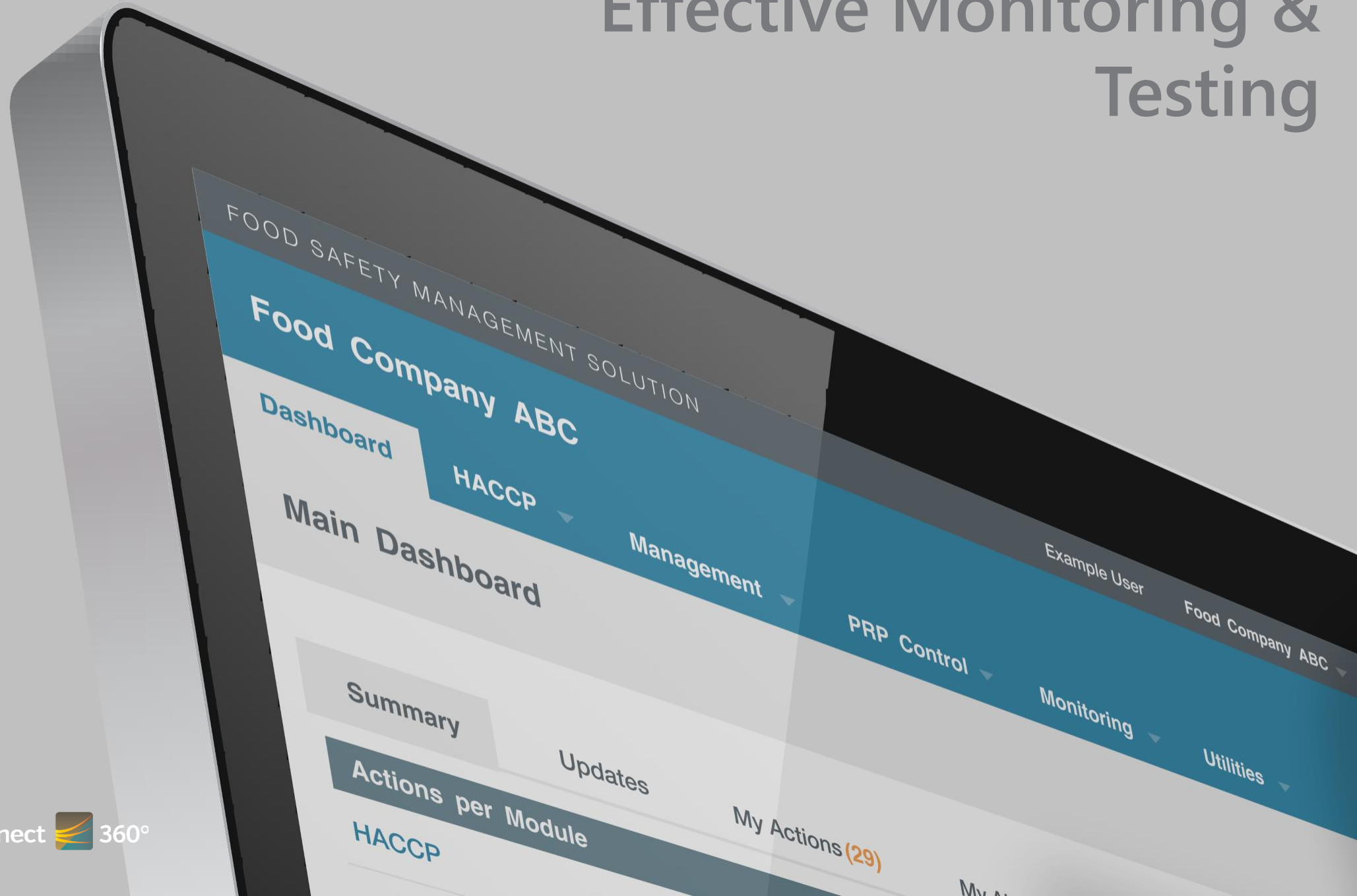


Effective Monitoring & Testing



Session Overview

Purpose:

- To thoroughly understand Tests and the capabilities of the Monitoring Module.
- To build well-designed and effective Monitoring Programs.

Session Leader:

- Philip Gillen, COO, Safefood 360

Timing:

- 45 Minutes

Agenda:

- Some Interesting 2016 Monitoring Statistics (2 minutes)
- Useful Supporting Information (2 minutes)
- Three Building Blocks of an Effective Monitoring & Testing System (25 minutes)
 - Tests
 - Programs
 - Records
- Tips & Tricks (2 minutes)
- Practical Exercise (10-15 minutes)

Some Interesting 2016 Monitoring Statistics...

Safefood 360 Monitoring Module Statistics January 01, 2016 to December 31, 2016

17.5% of entire platform

6,839
Monitoring
Programs

454,964
Monitoring
Records

1,820,326
Monitoring
Samples

17,183,536
Monitoring
Tests

235,064
Passed with
Warning (2%)

94,930
Failed
(.81%)

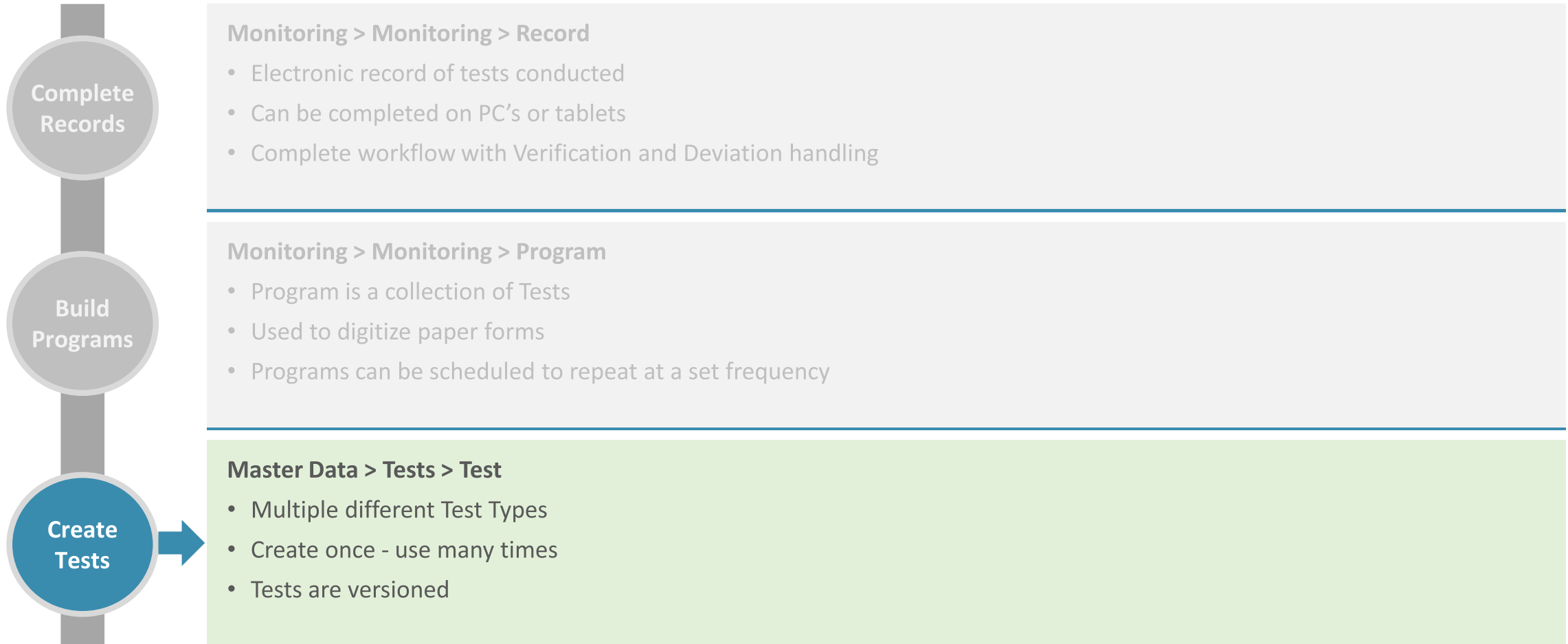
Useful Supporting Information

Safefood 360 reference sources of information for building an effective Monitoring & Testing system.

Type	Name	Location
Presentation	Effective Monitoring & Testing with Safefood 360°	URL available after conference
Presentation	Effective Monitoring of Control Measures	http://safefood360.com/free-resources/download/download-connect-360-2016/
Whitepaper	Design of CCP Monitoring Programs	http://safefood360.com/resources/Design-of-CCP-Monitoring-Programs.pdf
Webinar	Monitoring & Testing in Safefood 360	https://vimeo.com/127924281
Guide	Tests Module & Monitoring Module	http://help.safefood360.com/knowledge-base/
Article	How to use Tests in Safefood 360°	http://safefood360.com/2014/07/tips-for-using-tests/
Article	How to use food safety data to improve your processes	http://safefood360.com/2015/11/how-to-use-food-safety-data-to-improve-your-processes/
Presentation	Determining Control Measures in HACCP	http://safefood360.com/resources/Determining-Control-Measures-presentation.pdf

Three Building Blocks of an Effective Monitoring & Testing System

The three building blocks of a Monitoring & Testing system include Tests, Monitoring Programs and Monitoring Records.



Tests Module

Tests works together with the Safefood 360° Monitoring and Receiving Inspections modules. You can define numeric and qualitative tests and then easily embed them in your monitoring programs allowing you to capture data and test against your defined criteria.

Variable Test
Used to record numeric data which is variable in nature.

Attribute Test
Used to record non-numeric data which is predetermined in nature.

FOOD SAFETY MANAGEMENT SOLUTION

Safefood 360 S

ABC Food Company Inc

DashboardRiskManagementPRP ControlMonitoringMaster DataUtilities

Tests

Add Test

Variable Test

Attribute Test

Add Open Data

Text Field

Timestamp

File Upload

No.	Date	Name	Folder
5	10/01/15	Cooler Temperature	
7	10/01/15	Core Product Temperature (Despatch)	
6	10/01/15	Core Product Temperature (Receiving)	
3	08/20/15	Listeria	Microbiological
2	05/14/15	Temperature Check	
8	03/03/16	Temperature Check @ 32 Deg F	Weights & Measurements
1	05/14/15	Weigh Check	Weights & Measurements
4	09/17/15	Weight Check	

Page 1 of 1

Open Data > Text Field
Used to record non-test data of any type.

Open Data > Timestamp
Used to record the precise date and time.

Open Data > File Upload
Used to upload files only.

Variable Tests

Used to record numeric data which is variable in nature.

FOOD SAFETY MANAGEMENT SOLUTION Safefood 360 Support User

ABC Food Company Inc

Dashboard Risk Management PRP Control Monitoring Master Data Utilities

Variable Test

Test Details

Name:

Folder:

Variable Tests

Microbiological

Weights & Measurements

New Folder Rename Delete

Description:

Unit of Measurement:

Procedure:

Limits:

Limit Type	Limit	Event Notice
Upper Out of Spec (Fail)	33	Notify QA Manager, take device out of service
Upper Warning (Pass, Warning)	32.5	
Target (Pass)	32	
Lower Warning (Pass, Warning)	31.5	
Lower Out of Spec (Fail)	31	Notify QA Manager, take device out of service

Variable Test Types

- Weight
- Size - Length/Height/Width
- Temperature
- Viscosity
- PH
- Moisture Content
- Relative Humidity
- Count
- Conductivity
- Turbidity
- Mineral Content
- Chemical Content
- Pressure
- Volume
- Time - Hours/Minutes/Seconds

Variable Tests

Used to record numeric data which is variable in nature.

Test Details

Name

Temperature Check @ 32 Deg F

Folder

Variable Tests

Microbiological

Weights & Measurements

New Folder

Rename

Delete

Description

Check of Temperature

Unit of Measurement

Deg F

Procedure

Temperature Checks SOP

Limits

Limit Type	Limit	Event Notice
Upper Out of Spec (Fail)	33	Notify QA Manager, take device out of service
Upper Warning (Pass, Warning)	32.5	
Target (Pass)	32	
Lower Warning (Pass, Warning)	31.5	
Lower Out of Spec (Fail)	31	Notify QA Manager, take device out of service

Name

The name should be sufficiently descriptive, particularly with many tests.

Folder

A good idea to bucket similar tests into folders so that they can be easily found.

Description

This is useful as it is shown on the Monitoring Record when hover mouse over column.

Unit of Measurement

This is the unit of measurement for the test and is also shown on the Monitoring record.

Procedure

Very useful if the operator requires instruction or visual aids on how to conduct the test.

Limits

The Target, Warning and Fail limits for the test. Allows you to specify the Event Notice shown to Operator when limit is reached.

Attribute Tests

Used to record non-numeric data which is predetermined in nature.

FOOD SAFETY MANAGEMENT SOLUTION

Safefood 360° Support User

ABC Food Company Inc

Dashboard

Risk

Management

PRP Control

Monitoring

Master Data

Utilities

Attribute Test

Test Details

Name

Color Check

Folder

Attribute Tests

Metal Detection Checks

Color Checks

New Folder

Rename

Delete

Description

Check of the color of product

Procedure

Limits

Specification	Limit Type	Event Notice
Brown	Out of Spec (Fail)	Inform QA.
Green-Yellow	Warning (Pass, Warning)	Retrain sample for supervisor.
Green	Target (Pass)	
Black	Out of Spec (Fail)	Inform QA.

Add Line

Attribute Test Types

- Colour
- Smell
- Taste
- Flavour
- Shape
- Position
- Placement
- Presence
- Sealing
- Detection
- Appearance
- Cleanliness
- Quality
- Grade
- Damage
- Condition
- Consistency
- Integrity
- Decision

Attribute Tests

Used to record non-numeric data which is predetermined in nature.

Test Details

Name

Color Check

Folder

Attribute Tests

Color Checks

Metal Detection Checks

New Folder

Rename

Delete

Description

Check of the color of product

Procedure

Limits

Specification	Limit Type	Event Notice
Brown	Out of Spec (Fail)	Inform QA.
Green-Yellow	Warning (Pass, Warning)	Retrain sample for supervisor.
Green	Target (Pass)	
Black	Out of Spec (Fail)	Inform QA.

Add Line

Name

The name should be sufficiently descriptive, particularly with many tests.

Folder

A good idea to bucket similar tests into folders so that they can be easily found.

Description

This is useful as it is shown on the Monitoring Record when hover mouse over column.

Procedure

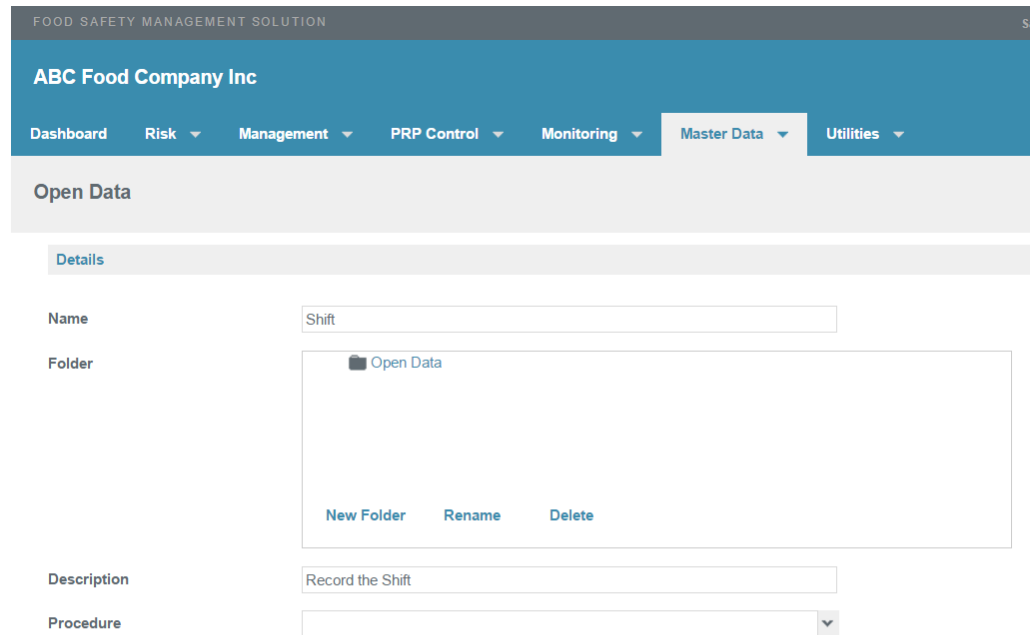
Very useful if the operator requires instruction or visual aids on how to conduct the test.

Limits

The Target, Warning and Fail limits for the test. You can add as many of these as are required. You can also specify the Event Notice shown to Operator when limit is reached.

Open Data

Used to record non-test data of any type. Currently fields include Text, Time Stamp and File Upload.



The screenshot shows the 'Open Data' form within the 'FOOD SAFETY MANAGEMENT SOLUTION' interface for 'ABC Food Company Inc'. The navigation bar includes 'Dashboard', 'Risk', 'Management', 'PRP Control', 'Monitoring', 'Master Data', and 'Utilities'. The 'Open Data' section is active, showing a 'Details' tab. The form fields are: 'Name' (text input with 'Shift'), 'Folder' (file explorer view showing 'Open Data' folder with 'New Folder', 'Rename', and 'Delete' buttons), 'Description' (text input with 'Record the Shift'), and 'Procedure' (dropdown menu).

Text Field

- Shift
- Operator
- Reference
- Pack Date
- Description
- Note
- Comments
- Report
- Certification Number
- Weather
- Carrier Number

- Quantity
- Order Number
- Department

Time Stamp Field

- Start Time
- Finish Time

File Upload Field

- Label Sample
- Picture
- Certificate

Open Data

Used to record non-test data of any type. Currently fields include Text, Time Stamp and File Upload.

Details

Name

Shift

Folder

Open Data

New Folder

Rename

Delete

Description

Record the Shift

Procedure

Name
The name should be sufficiently descriptive, particularly with many tests.

Folder
A good idea to bucket similar tests into folders so that they can be easily found.

Description
This is useful as it is shown on the Monitoring Record when hover mouse over column.

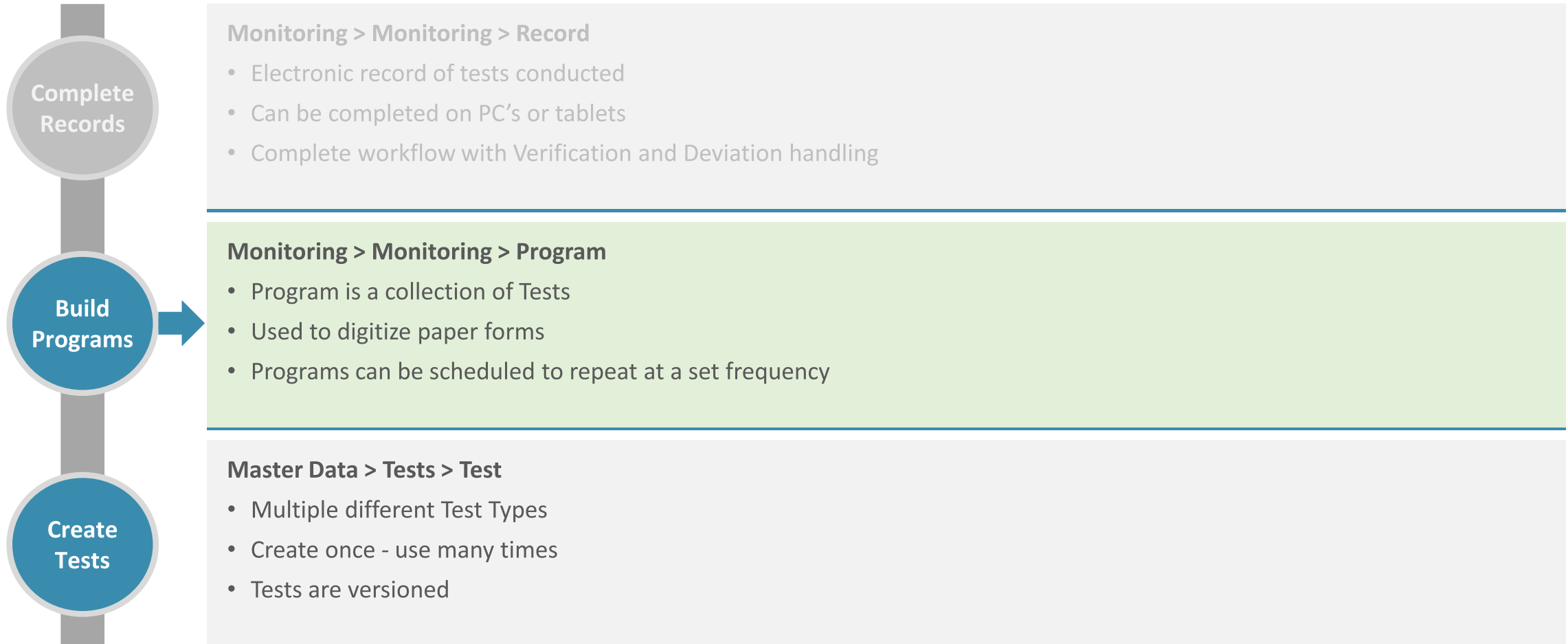
Procedure
Very useful if the operator requires instruction or visual aids on how to conduct the test.

Note: Exact same form is used for Text, Time Stamp & File Upload Fields.

Only difference is how they behave on the Monitoring Record.

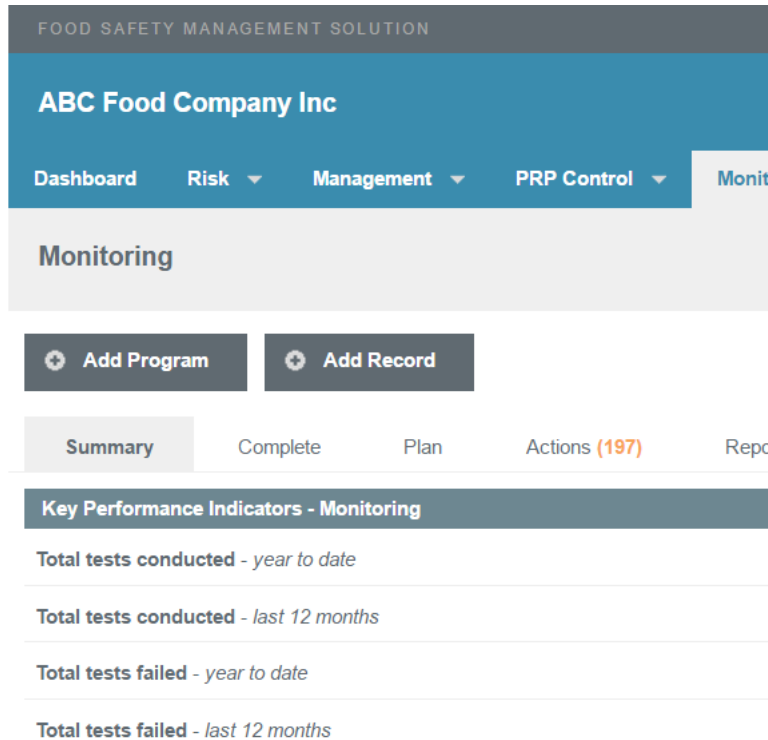
Building Blocks of an Effective Monitoring & Testing System

The three building blocks of a Monitoring & Testing system include Tests, Monitoring Programs and Monitoring Records.



Monitoring Module

The Monitoring module allows you to build all your CCP and operational monitoring programs in one place. You can monitor weights, temperature, moisture, colour, or any other kinds of tests or measurements in your facility.

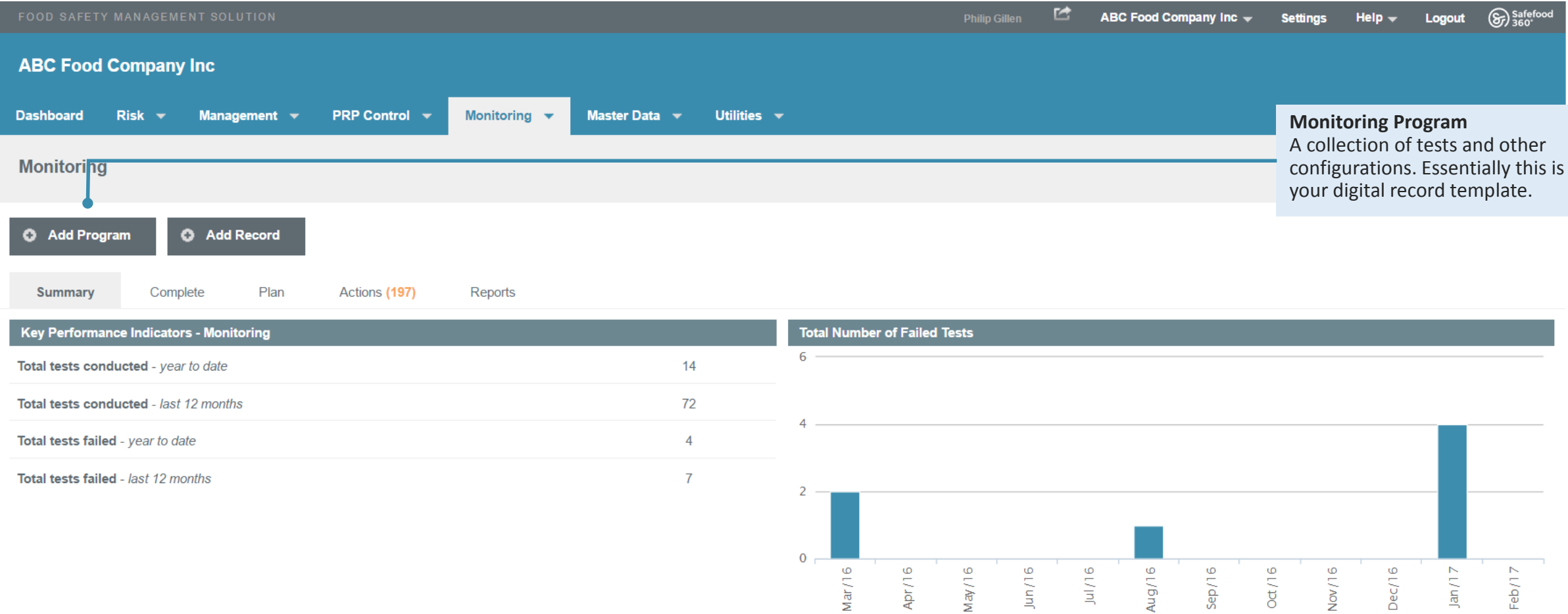


The screenshot shows the 'Monitoring' module interface for 'ABC Food Company Inc'. The top navigation bar includes 'Dashboard', 'Risk', 'Management', 'PRP Control', and 'Monitoring'. Below the navigation bar, there are two buttons: 'Add Program' and 'Add Record'. The main content area is titled 'Monitoring' and features a 'Key Performance Indicators - Monitoring' section. This section displays four metrics: 'Total tests conducted - year to date', 'Total tests conducted - last 12 months', 'Total tests failed - year to date', and 'Total tests failed - last 12 months'. The interface is clean and professional, with a blue and grey color scheme.

- Accident Reporting
- Allergen Program
- Batch Close Sheet
- CCP Monitoring
- Chemical Usage
- Daily Inspections
- Deviation Reporting
- Environmental Monitoring
- Equipment Usage Log
- Exception Reporting
- Finished Product Grading
- Fire Safety Testing
- Goods In Checks
- Goods Out Checks
- Heavy Metal Testing
- In Process Check Sheet
- Knife / Sharp Control
- Label Control
- Load Check Form
- Magnet Tests
- Metal Detections
- Microbiological Swabbing
- Packing Records
- Pre-Operational Checks
- Product Tracker
- Production Records
- Quality Control Checks
- Refrigerator Log
- Scale Calibration
- Shelf Life Trials
- Species Validation
- Staff Hand Swabbing
- Temperature Monitoring
- Variance Tracking
- Waste Recording
- Water Activity

Monitoring Module > Add Program

Add a Program in the Monitoring Module.

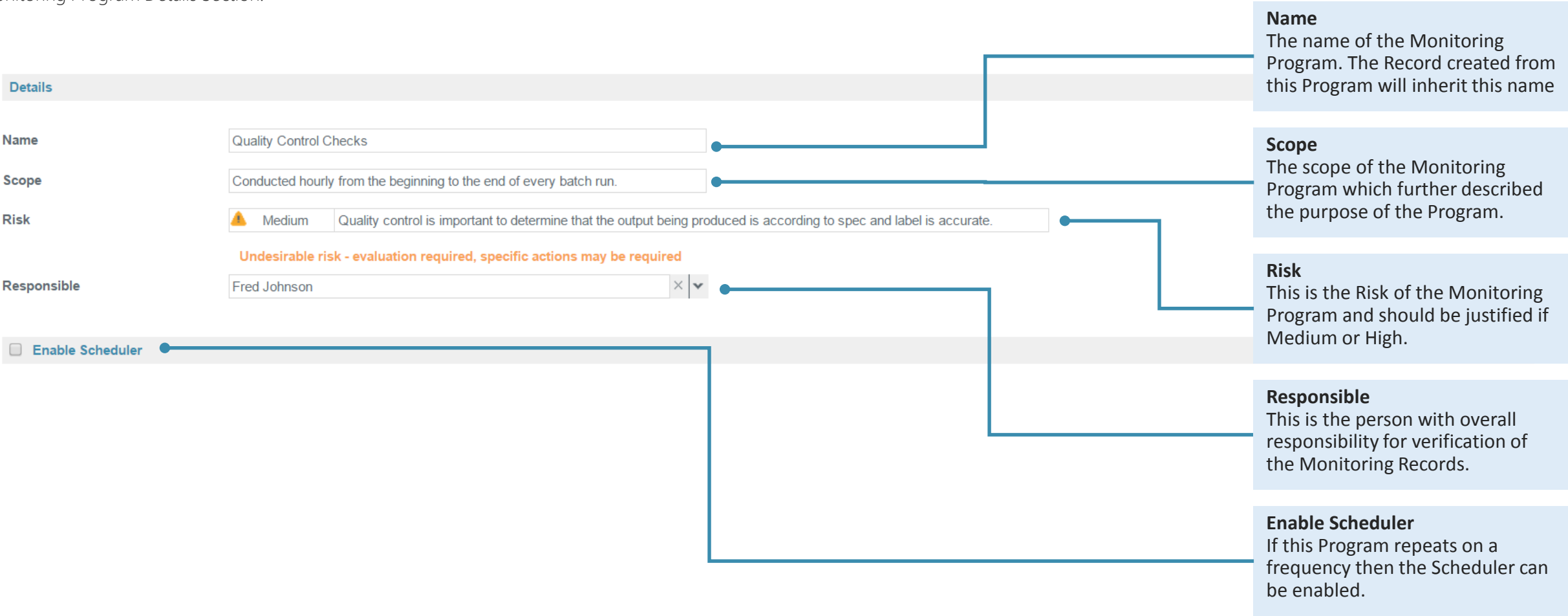


Monitoring Program

A collection of tests and other configurations. Essentially this is your digital record template.

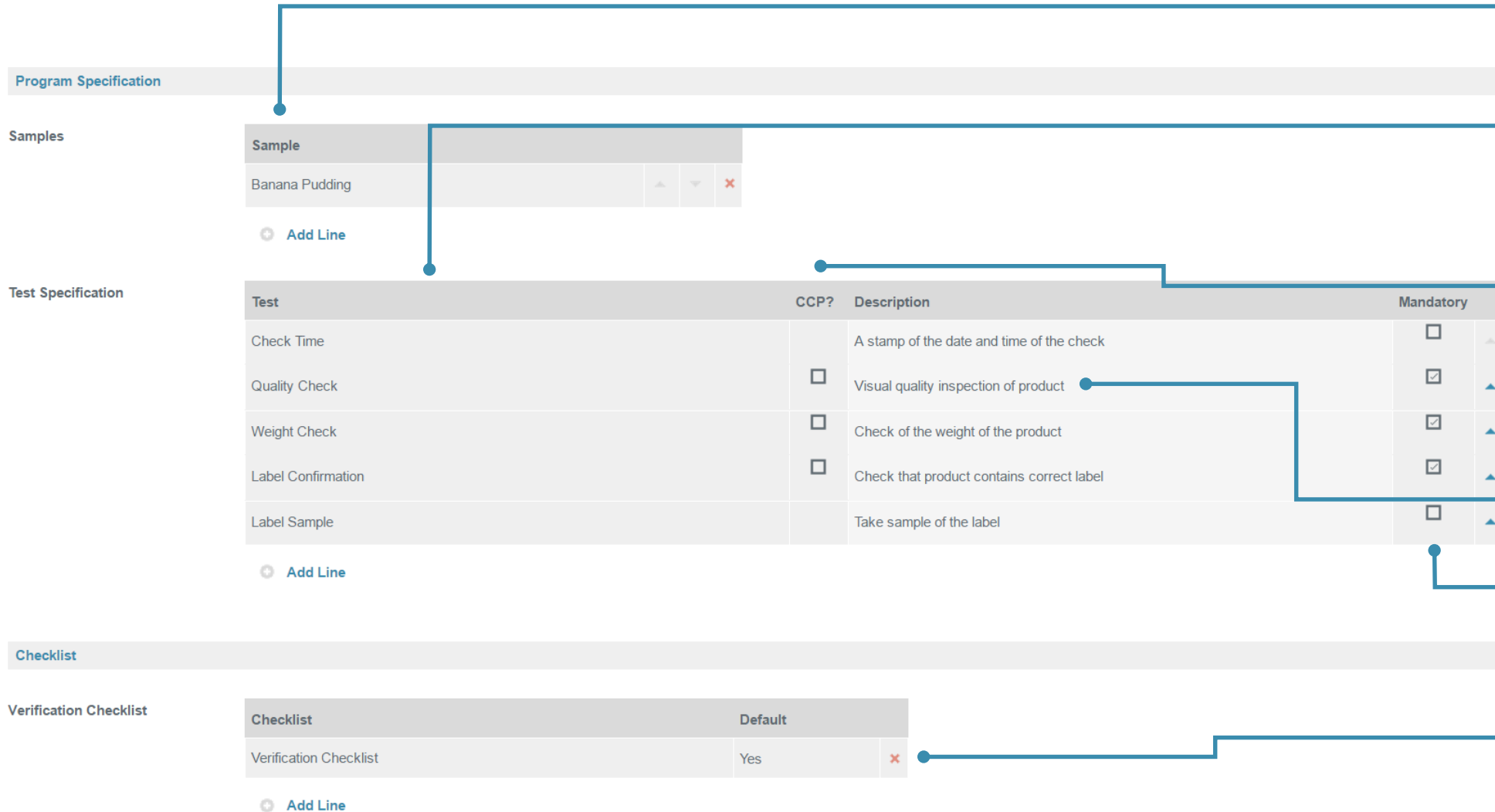
Monitoring Program (Part 1)

Monitoring Program Details Section.



Monitoring Program (Part 2)

Monitoring Program Specification & Checklist Sections.



The screenshot displays the 'Monitoring Program Specification & Checklist' interface. It is divided into several sections: 'Program Specification', 'Samples', 'Test Specification', 'Checklist', and 'Verification Checklist'. Blue lines with dots connect specific interface elements to explanatory text boxes on the right.

Program Specification

Samples

Sample
Banana Pudding

[Add Line](#)

Test Specification

Test	CCP?	Description	Mandatory
Check Time		A stamp of the date and time of the check	<input type="checkbox"/>
Quality Check	<input type="checkbox"/>	Visual quality inspection of product	<input checked="" type="checkbox"/>
Weight Check	<input type="checkbox"/>	Check of the weight of the product	<input checked="" type="checkbox"/>
Label Confirmation	<input type="checkbox"/>	Check that product contains correct label	<input checked="" type="checkbox"/>
Label Sample		Take sample of the label	<input type="checkbox"/>

[Add Line](#)

Checklist

Verification Checklist

Checklist	Default
Verification Checklist	Yes

[Add Line](#)

Samples

You can select the Samples which tests will be conducted upon, if known in advance.

Test

Select the relevant Tests that you created in the Tests module. You can also select Master Data (i.e. Products, Items of Equipment etc)

CCP?

If a Critical Control Point then indicate it here and it will be highlighted as such on the Record.

Description

This is the description of the Test which is simply shown as a reminder of the test purpose.

Mandatory

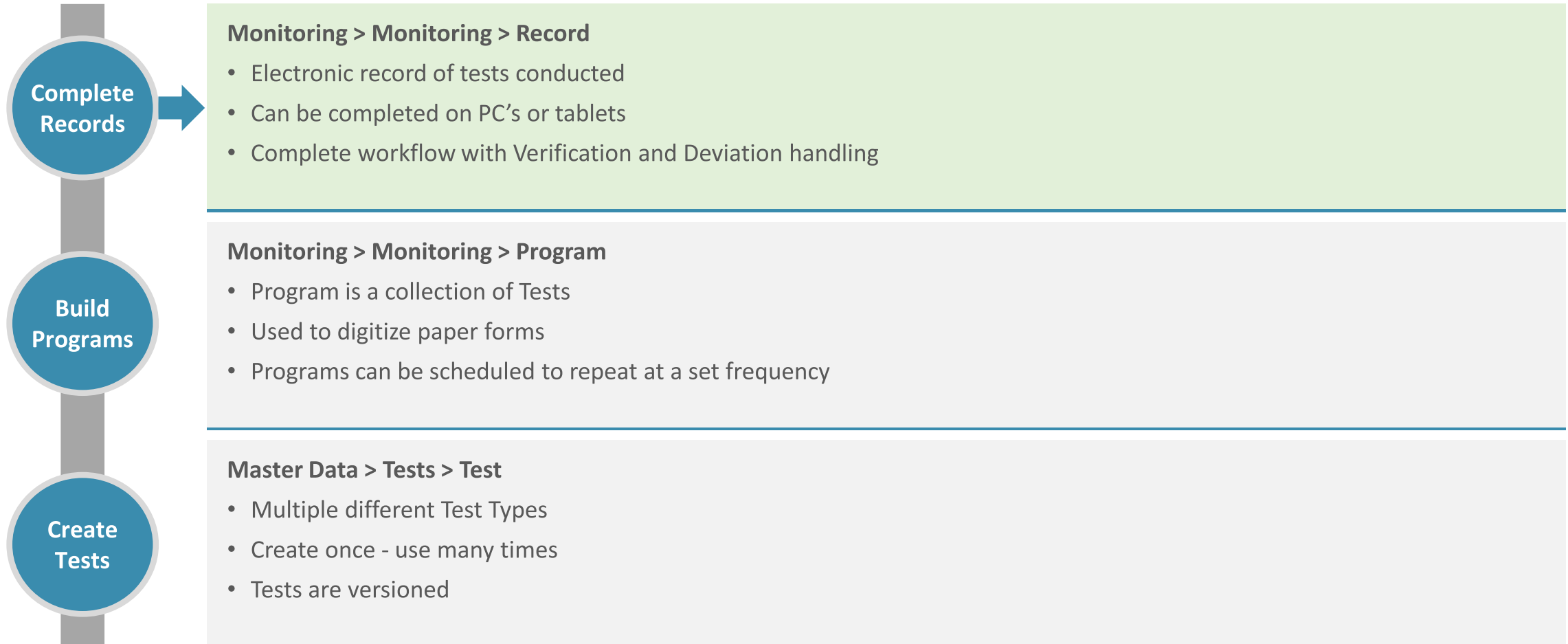
If the Test/field is required then tick this box and the Operator must complete this field.

Verification Checklist

This is a list of checks that will be conducted at the verification stage. A default is provided.

Building Blocks of an Effective Monitoring & Testing System

The three building blocks of a Monitoring & Testing system include Tests, Monitoring Programs and Monitoring Records.



Monitoring Module > Add Record

Add a Record in the Monitoring Module.

FOOD SAFETY MANAGEMENT SOLUTION

Philip Gillen

ABC Food Company Inc

Settings

Help

Logout

Safefood 360°

ABC Food Company Inc

DashboardRiskManagementPRP ControlMonitoringMaster DataUtilities

Monitoring

Add Program

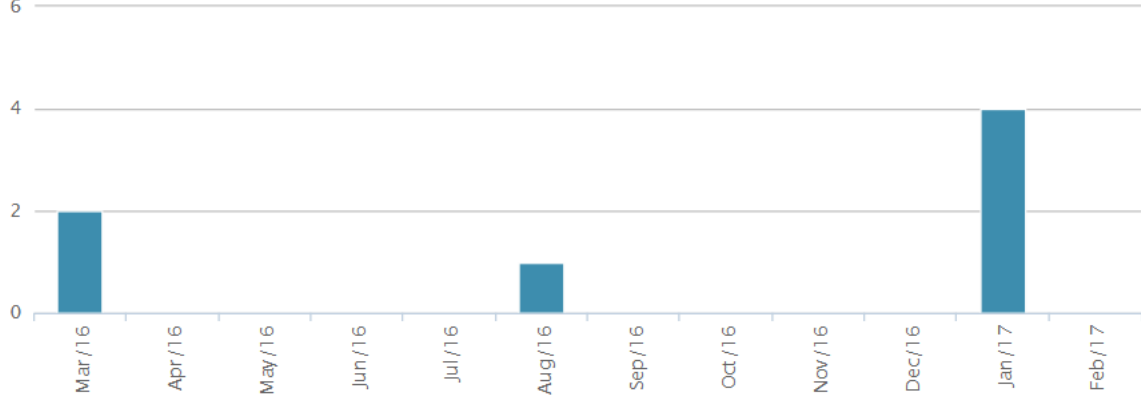
Add Record

SummaryCompletePlanActions (197)Reports

Key Performance Indicators - Monitoring

Total tests conducted - year to date	14
Total tests conducted - last 12 months	72
Total tests failed - year to date	4
Total tests failed - last 12 months	7

Total Number of Failed Tests



Month	Failed Tests
Mar/16	2
Apr/16	0
May/16	0
Jun/16	0
Jul/16	0
Aug/16	1
Sep/16	0
Oct/16	0
Nov/16	0
Dec/16	0
Jan/17	4
Feb/17	0

Monitoring Record

This is the Record itself which your operator will complete on a tablet or other device.

Monitoring Module > Add Record

Add a Record in the Monitoring Module and select Program.

FOOD SAFETY MANAGEMENT SOLUTION

Philip Gillen

ABC Food Company Inc

Settings

Help

Logout

Safefood 360°

ABC Food Company Inc

DashboardRiskManagementPRP ControlMonitoringMaster DataUtilities

Monitoring

Add Program

Add Record

SummaryCompletePlanActions (199)Reports

Key Performance Indicators - Monitoring

Total Number of Failed Tests

Total tests conducted - year to date

Total tests conducted - last 12 months

Total tests failed - year to date

Total tests failed - last 12 months

Add Record

Program: Quality Control Checks

CreateCancel

0

Mar/16

Apr/16

May/16

Jun/16

Jul/16

Aug/16

Sep/16

Oct/16

Nov/16

Dec/16

Jan/17

Feb/17

Monitoring Record > Record Stage

Monitoring Record > Record Stage.

Check Time

This is a Time Stamp field and the Date & Time will automatically be inserted when the operator clicks.

Quality Check

Tests with linked Procedures will show a blue hyperlink. When clicked the Procedure will Open.

Monitoring Record

Date

02/12/17

Record

Sample	Trace No.	Check Time	Quality Check	Weight Check (98 - 103 Grams)	Label Confirmation	Label Sample	Result	Comp
Banana Pudding	BN12345	02/12/17 11:59	Pass	100	Correct	Label_Sample.jpg Add File	Pass	Fred J
Banana Pudding	BN12345	02/12/17 13:00	Pass	102	Correct	Label_Sample.jpg Add File	Pass, Warning	Fred J
Banana Pudding	BN12345	02/12/17 14:02	Pass	103.5	Correct	Label_Sample.jpg Add File	Fail	Fred J

Add Line

Report

Retest

☒

Retest

If a Retest is required then checking this box will open up the Retest workflow.

Report

This general Report field can be used for any additional notes or comments about the record.

Label Sample

This is a File Upload field. An unlimited number of files can be uploaded to each cell.

Overall Result

This is the 'lowest' result for the Sample being tests. I.e. Lowest result across all tests in row.

Monitoring Record > Retest Stage

Monitoring Record > Retest Stage.

Monitoring Record

Retest

Retest

Sample	Trace No.	Weight Check (98 - 103 Grams)	Result	Completed By
Banana Pudding	BN12345	101.5	Pass	Fred Johnson

+

 Add Line

Report

Note: Retest Stage is the same as the Monitoring Record Stage. Except that only Failed Tests will show, allowing for a repeat test.

Monitoring Record > Verification Stage

Monitoring Record > Verification Stage.

Monitoring Record

Retest

Verification

Verification

Requirements	Result
Have samples passed all required test specification?	No

Report

Decision

☐ Release

☒ Nonconformance / Deviation

Decision

If all is Ok with the Record then release, otherwise an NC / Deviation Stage can be opened.

Report

This general Report field can be used for any additional notes or comments about the Verification.

Verification Checklist

This is a configurable checklist which is answered by the person verifying the Record.

Monitoring Record > Nonconformance / Deviation Stage

Monitoring Record > Nonconformance / Deviation Stage.

Monitoring Record

Retest

Verification

Nonconformance / Deviation

Deviation and Root Cause

A noticeable deviation in average weight towards end of shift. RCA pending.

Deviation Actions

Action Required	Responsible	Deadline	Completed By	Completed
Check all weighing equipment on Line 1 and calibrate if necessary.	Smith, Joe (General Labor)	02/17/17		

+

 Add Line

Report

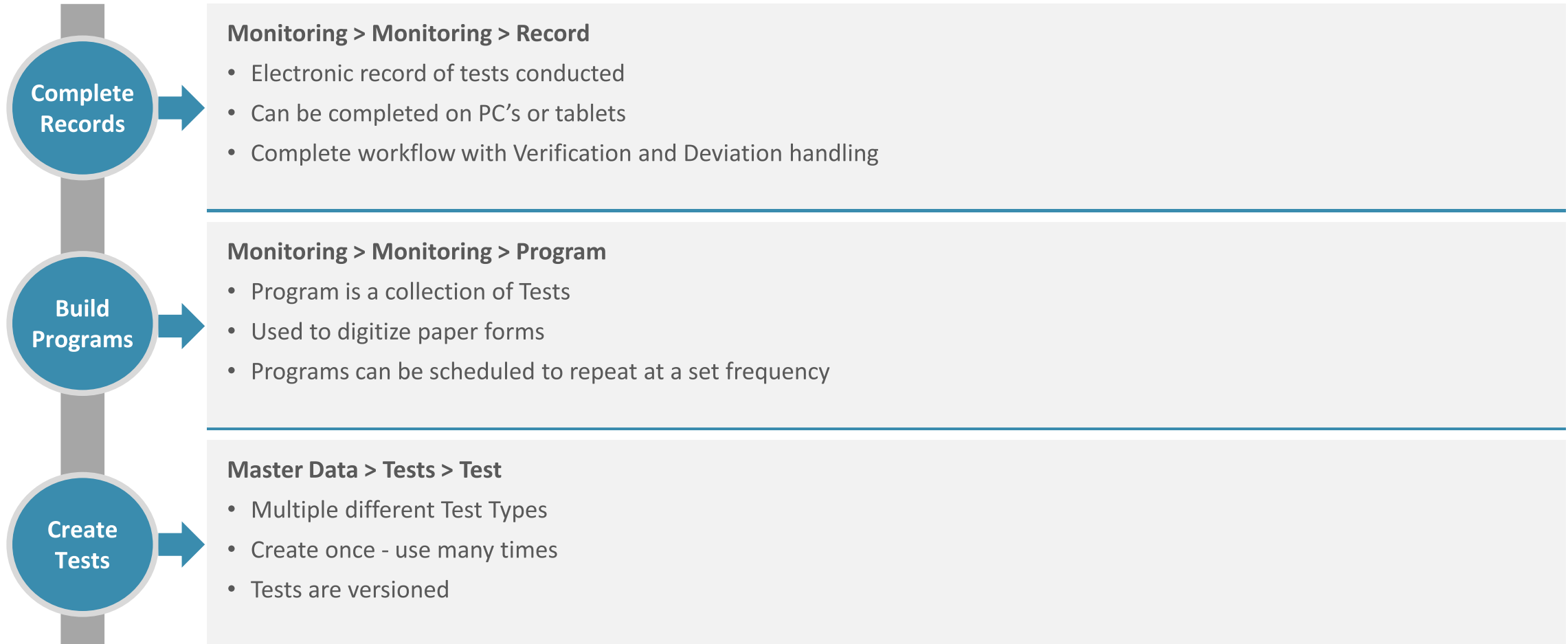
Report
This general Report field can be used for any additional notes or comments about the Deviation.

Deviation Actions
You can assign Actions to individuals with Deadlines, and track Completion dates.

Deviation and Root Cause
Here you can specify what the Deviation is and, if known at this stage, the Root Cause.

Building Blocks of an Effective Monitoring & Testing System

The three building blocks of a Monitoring & Testing system include Tests, Monitoring Programs and Monitoring Records.



Tips & Tricks

Seven additional tips & tricks for building an effective Monitoring & Testing system.



Multiple Monitoring Programs can be connected to a single Batch Program.



Samples can be almost anything including People (think Employee Hand Swabbing).



Operators should be instructed to use the Save button frequently and at a minimum after each sample (row) added.



Learn how to use Alerts. They are a powerful addition to the Monitoring Module.



Always associate Users with their Employee contacts. The operators name will be automatically added to the Record.



Attribute Tests can also be used like Open Data with a dropdown list of options (all set to pass).



Take time designing your Tests and seek our assistance if required. They can make or break your Monitoring system.

Task

Send your forms to philip.gillen@safefood360.com



10-15 minutes



- Analyze the form
- Identify each data point
- Create the required Variable & Attribute Tests
- Create the required Open Data fields
- Build the Monitoring Program
- Complete a Monitoring Record

[illegible]



Unit 30-40, Parkway Industrial, New York NY 10016.

Phone: 646 233 2852

Email:info@abcfoodcompany.com

Daily Packing Record

344

Claire Braiden

Record

Date & Batch Code: _____ Shift: _____ Line: _____ Record Verified (Quality Manager): _____ Product Release (Yes/No): _____

1 of 1

1/5/15

8

Quality Manager

[illegible]



Unit 30-40, Parkway Industrial, New York NY 10016.

Email:info@abcfoodcompany.com

- Header is unnecessary
- Title of document becomes title of Monitoring Program

Reference:	344
Authorised By:	Claire Braiden
Document Type:	Record

Page: 1 of 1
Issue Date: 1/5/15

Version 8
Responsible: Quality Manager

Date & Batch Code: _____ Shift: _____ Line: _____ Record Verified (Quality Manager): _____ Product Release (Yes/No): _____

- Date is automatically added to the Record and can be changed
- Batch Code is present on the Record and is called Trace No.

Claire Braiden

1/5/15

8

Quality Manager

Record

Date & Batch Code: _____ Shift: _____ Line: _____ Record Verified (Quality Manager): _____ Product Release (Yes/No): _____

- Shift could either be an Open Data field or an Attribute Test with all values set to Pass

Product Release (Yes/No): ____

- Line will be a “Production Units” Master Data Selector
 - Or could be an Open Data field
 - Or an Attribute test with all values set to pass

Product Release (Yes/No): ____

- This is the person conducting the Verification Stage of the Record so no field is required

- Time can be added as a Time Stamp

- Size can be an Open Data field, or selected as part of the Product (i.e. 500ml Bottle of Spring Water)

[illegible]

- Quantity Produced can be an Open Data field
- Should also add a “Unit” Master Data Selector to select the Unit type, or this could be an Attribute test with all values set to pass

- Shrink Wrap Check is an Attribute test with the following values
 - Wrap is good and intact (pass)
 - Wrap is not good but intact (pass, warning)
 - Wrap is not intact (fail)

- Pallet Check is an Attribute test with the following values
 - Pallet is clean and intact with no odours (pass)
 - Pallet has odours and/or is unclean (fail)
 - Pallet is not intact (fail)

- Suggest two different tests for Label Check
 - Label Quality/Position (attribute test)
 - Label Batch Number Present (attribute test)
- Could also add a File Upload field for a picture of the label!

- Final Pallet will be an attribute test with the following values
 - Pallet is stable and configured correctly (pass)
 - Pallet is stable but configured incorrectly (pass, warning)
 - Pallet is unstable (fail)

[illegible]

[illegible]

[illegible]



Unit 30-40, Parkway Industrial, New York NY 10016.

Phone: 646 233 2852

Email:info@abcfoodcompany.com

Daily Packing Record

Reference:

344

Page:

1 of 1

Version

8

Authorised By:

Claire Braiden

Issue Date:

1/5/15

Responsible:

Quality Manager

Document Type:

Record

Date & Batch Code: _____ Shift: _____ Line: _____ Record Verified (Quality Manager): _____ Product Release (Yes/No): _____

[illegible]