



Welcome to **Visual Instructor 4.0**
Simply & Effectively Create Visual Work Instructions (VWI)



The Foundation:

What do we mean by
“Standardized Work”

We mean the *“one and only one way”*
to perform a process!

Which protects your quality!

Why Visual Instructions Work:

Brain analysts at University of Oxford's Department of Experimental Psychology were asked, "How do visual instructions influence the motor system?"

Their reply was, "***We saw direct correlation of visual cues to motor skills responses.***"

In other words, using visual aids combined with instructions creates a consistency in motor skills. There is a great lesson...and a possible mandate to include visual cues with instructions for product build.

(Visual Documentation in Manufacturing by Steven Blackwell, PhD, Lean Directions, February 2005 issue)

Why Visual Instructions Work:

Lessons Learned

What are the *ramifications* to your product being built *without a visual reference*?

Is this occurring right now on your production floor?

VISUAL DOCUMENTATION

Using Visual Instructor 4.0

Visual Documentation

Actual Work Instructions

Company: Boyer Quality Engineering Process: Cable Assembly (Courtesy of BQE)	Date: 2/15/05
SOE#: ABC 123	ISO 9000: ABC 123 Cable Assembly
REV #: Rev 1.0 4/15/05	Page 1 of 1

1. CHECK: Pull out supply a roll of #11 Conductor Flat Cable for job. The cable should be under the bench or in the kanban box. It is a multicolored table with black, red, blue, yellow and gray strand running the length of the cable. Do NOT confuse it with our own 231 B cable which does not have the blue strand. CHECK to make sure the cable is defective free, examining it to make sure that there are no defects of any kind. Use a CHECK pointer to make sure that the cable is in fact effective free. Place the cable on the workbench to do the examination and work content.
2. WORK-CONTENT: (Tools: You will need #11 Conductor Flat Cable fixture) Place the #11 Conductor Flat Cable on the fixture using your first index finger to hold it in place. The fixture is a wood fixture with markings for length. The length of the measurement is 25.25" and we'll be used for cutting the cable to exact length. Place the #11 Conductor Flat Cable on the fixture starting with the beginning of the measurement on the fixture and extended to the other end of the measurement until you are prepared to cut the cable.
3. WORK-CONTENT: (Tools: You will need scissors for this next operation) Now that you have the cable stretch to out across the measurement on the #11 Conductor Flat Cable fixture (make sure the cable does not slip out of place). Places your scissors in your fingers and cut the cable at the 25.25" mark on the #11 Conductor Flat Cable fixture. Place the scissors out of the way on the table.
4. VERIFY: Once you have completed the steps above, examine the #11 Conductor Flat Cable on the fixture to VERIFY that you have cut (1) the cable at the proper length (25.25" + or - .25) and (2) that you have made a clean cut. Use the VERIFY pointer to focus on the cut to assure accuracy. If the work has been completed correctly, the #11 Conductor Flat Cable cutting work content is complete.

Visual Documentation

Same Instructions using Visual Instructor 4.0

Visual INSTRUCTOR 4.0

Visual Work Instructions
Cable Assembly (Courtesy of BQE)

Cable Cutting Department, Longmont, Colorado	ISO9001-000101	<input checked="" type="checkbox"/> Check <input type="checkbox"/> Work Content <input type="checkbox"/> Verify <input type="checkbox"/> Safety
Rev. 1.0	This process demonstrates how we cut a 123 Cable	

Step	Description	Cycle
1	Check the #11 CONDUCTOR FLAT CABLE is correct and defective free.	12 sec
2	Place FLAT CABLE on RULER of FIXTURE.	14 sec
3	Cut CABLE to LENGTH as shown using SCISSORS.	5 sec
4	Verify CABLE is correct to LENGTH (25.25" + or - .25)	12 sec

Page 1 of 1 Uncontrolled Document - C:\Users\steve\Desktop\cable 1.pdf 12/27/2018

Visual Documentation

Building Quality In

The Purpose of a Visual Work Instruction(VWI) is to:

1. Depict the **“ONE AND ONLY ONE WAY”** to perform the **Work Content**. (*Minimizing Process Variability*)
2. Identify Total Quality Control **Check** and **Verify** points. (*Built-In-Quality*)
3. Let the Operator **“SEE”** the instructions, not *just read them*.

Visual Documentation

Visual Work Instructions (VWI)

Specific Method of Creation

- **Document the process** developed step by step (SOE)
- **Use Digital Camera or phone** depicting the process as documented in the (SOE)
- **Merge the text with the pictures** in the software to create the Process VWI (Visual Work Instructions)
- **Enter into Documentation Control** managing revisions and releases of VWIs to the Production Line.



Simply & Effectively Create Visual Work Instructions (VWI)

Software Orientation

Visual Documentation

Visual Instructor Pro - Untitled*

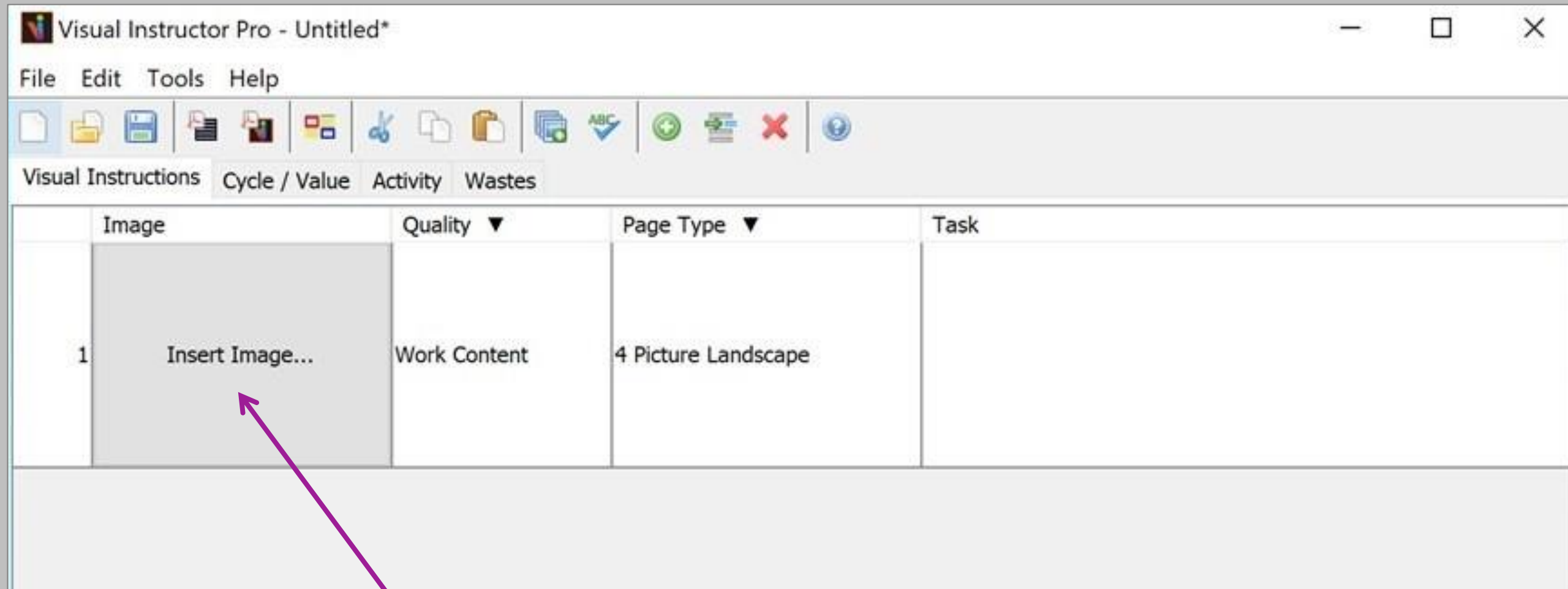
File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

	Image	Quality ▼	Page Type ▼	Task
1	Insert Image...	Work Content	4 Picture Landscape	

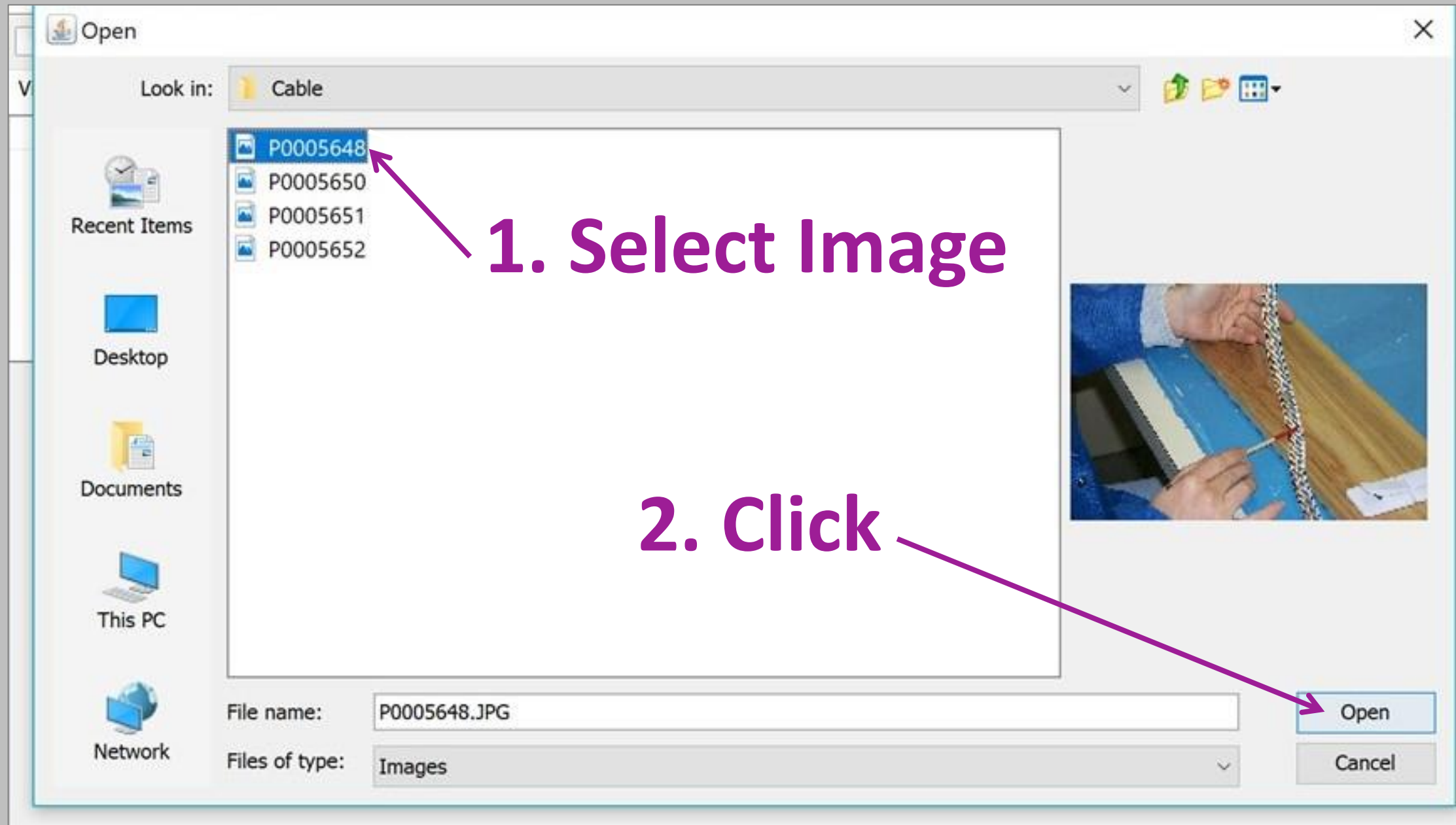
Click "New"

Visual Documentation

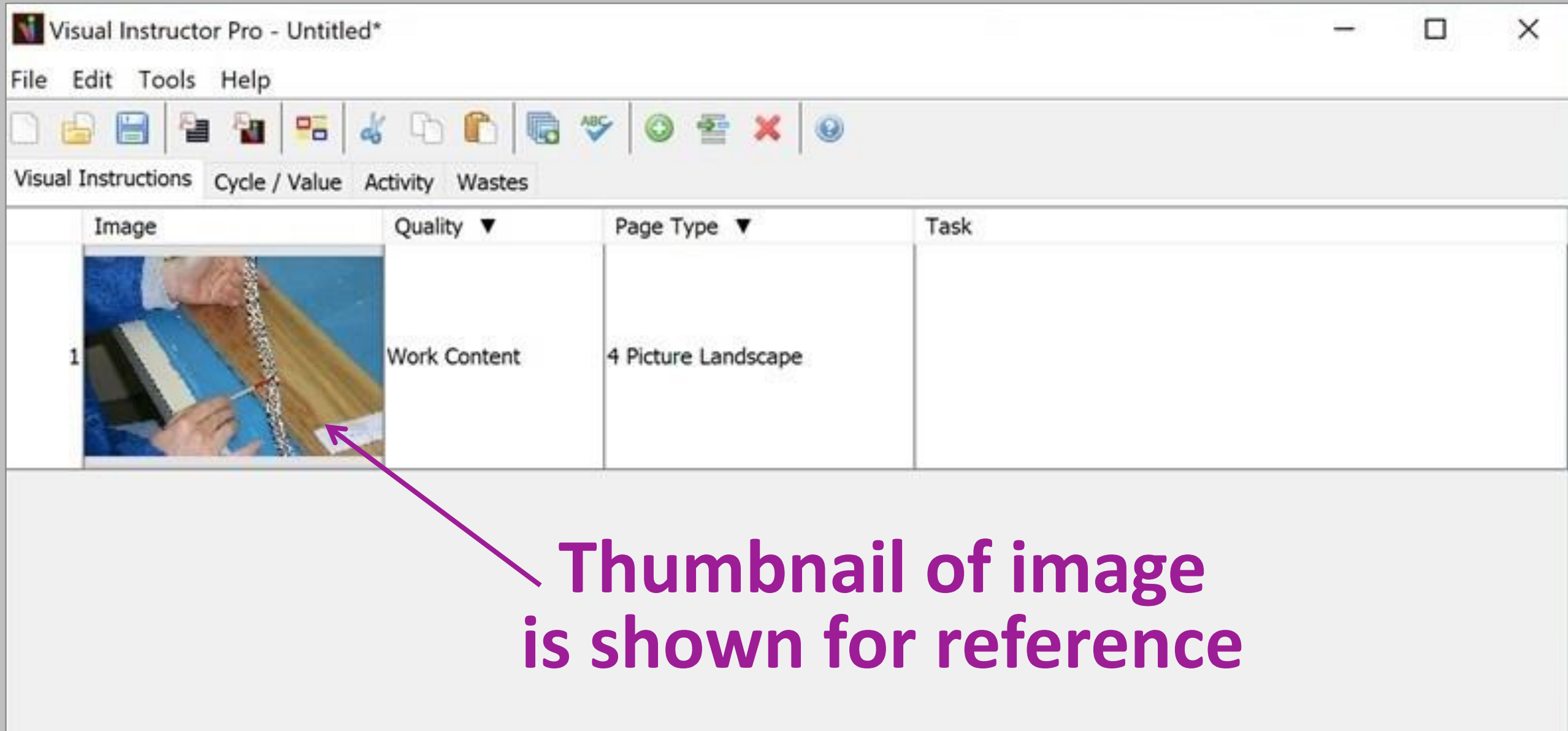


Click to
"Insert Image"


Visual Documentation



Visual Documentation



The screenshot shows the Visual Instructor Pro software interface. The window title is "Visual Instructor Pro - Untitled*". The menu bar includes "File", "Edit", "Tools", and "Help". The toolbar contains various icons for file operations and editing. Below the toolbar, there are tabs for "Visual Instructions", "Cycle / Value", "Activity", and "Wastes". The main area displays a table with the following columns: "Image", "Quality", "Page Type", and "Task".

Image	Quality ▼	Page Type ▼	Task
1 	Work Content	4 Picture Landscape	

A purple arrow points from the text below to the thumbnail image in the table.


**Thumbnail of image
is shown for reference**

Visual Documentation

Visual Instructor Pro - C:\Users\steve\Documents\Work\Vi Software Files\Demos\Cable\cable.soe

File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

	Image	Quality ▼	Page Type ▼	Task
1	P0005648.JPG	Check	4 Picture Landscape	Check the #11 CONDUCTOR FLAT CABLE is correct and defe...
2	P0005650.JPG	Work Content	4 Picture Landscape	Place FLAT CABLE on RULER of FIXTURE.
3	P0005651.JPG	Work Content	4 Picture Landscape	Cut CABLE to LENGTH as shown using SCISSORS.
4		Verify	4 Picture Landscape	Verify CABLE is correct to LENGTH (25.25" + or - .25)

Work Content
Check
Verify
Safety

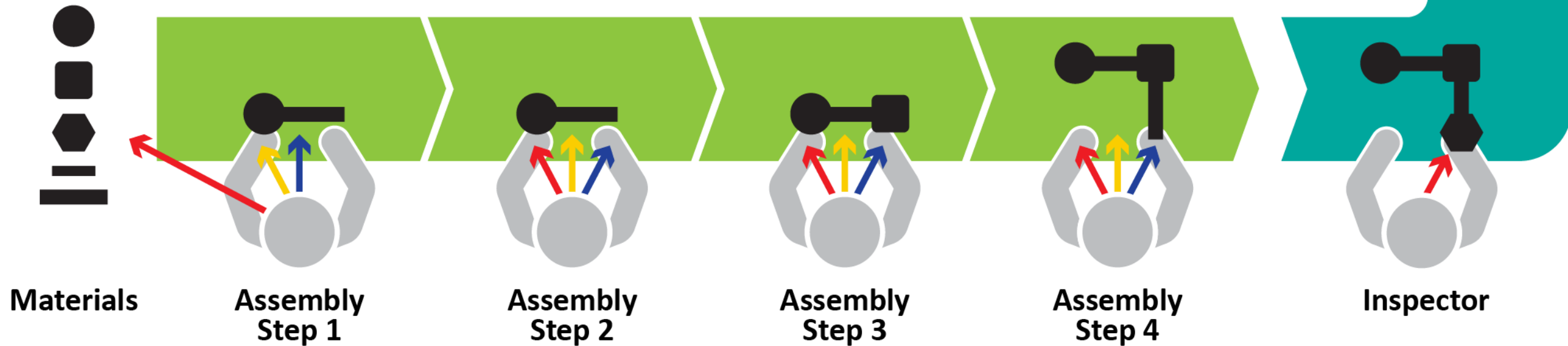
← **Select category of image**
(Total Quality Control Code)

Total Quality Control

Building In Quality (process review)

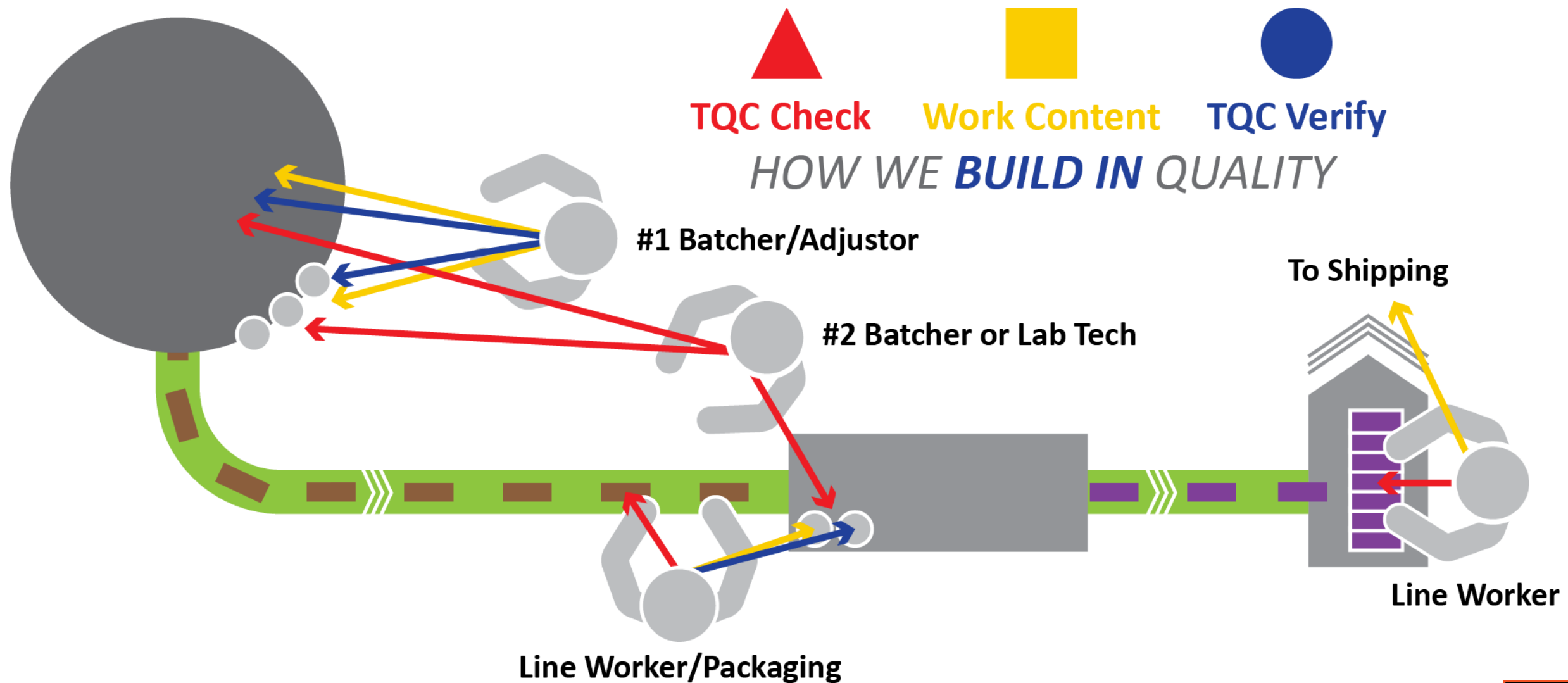
Steps in order: **1** **2** **3**
TQC Check **Work Content** **TQC Verify**

Each station working at the same time
in a balanced fashion



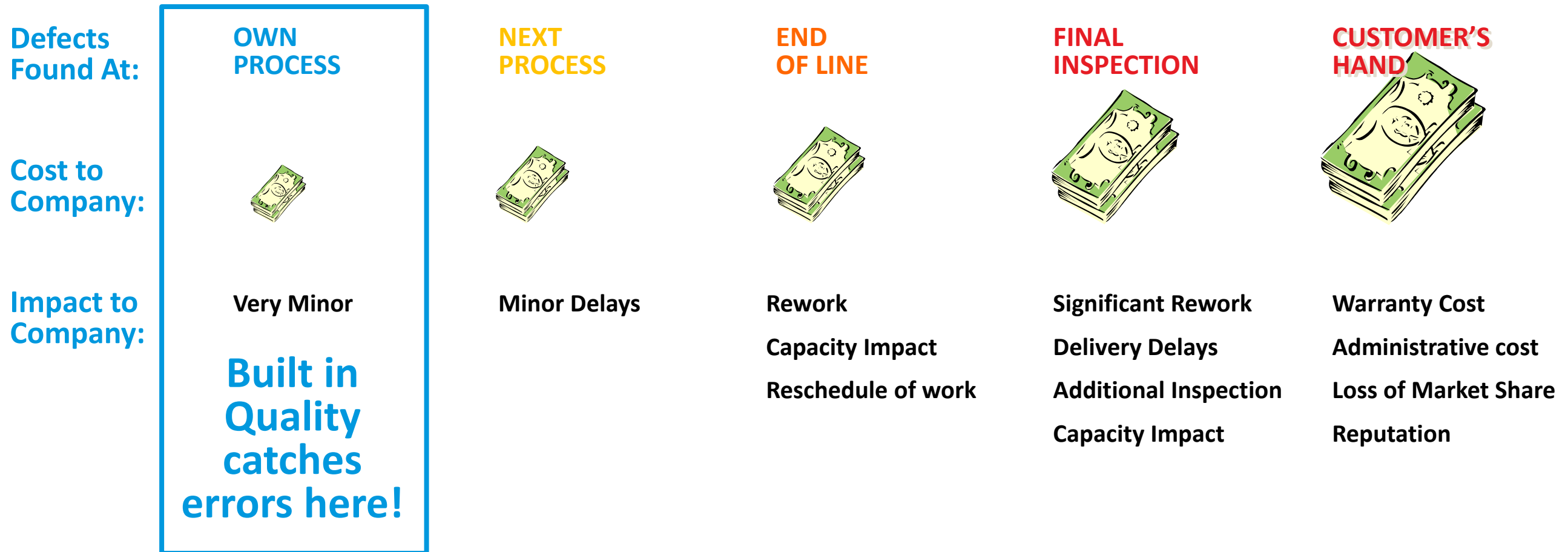
Total Quality Control

Building In Quality for Batch Systems



Total Quality Control

Building In Quality reduces “Cost of quality”



Total Quality Control

Building In Quality reduces “Cost of quality”

In Conclusion:

It's less expensive and less time to use check & verify at the point of build, than to check at the end of build and take the chance that everything is right.


**The financial health of your company
& your job depends on it.**

Visual Documentation

Visual Instructor Pro - C:\Users\steve\Documents\Work\Vi Software Files\Demos\Cable\cable.soe

File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

	Image	Quality ▼	Page Type ▼	Task
1	P0005648.JPG	Check	4 Picture Landscape	Check the #11 CONDUCTOR FLAT CABLE is correct and defe...
2	P0005650.JPG	Work Content	4 Picture Landscape	Place FLAT CABLE on RULER of FIXTURE.
3	P0005651.JPG	Work Content	4 Picture Landscape	Cut CABLE to LENGTH as shown using SCISSORS.
4		Verify	4 Picture Landscape	Verify CABLE is correct to LENGTH (25.25" + or - .25)

Work Content
Check
Verify
Safety

Performing the task
Check
Verify
Safety

Visual Documentation

Visual Instructor Pro - C:\Users\steve\Documents\Work\Vi Software Files\Demos\Cable\cable.soe

File Edit **Tools** Help

Visual Instructions Cycle / Value **Act Options**

Image	Image
1	P0005648.JPG
2	P0005650.JPG
3	P0005651.JPG
4	

Header Security System **Colors**

Red Green Blue

Border Color: 105 105 105

Check Color: 255 0 0

Work Color: 255 255 0

Verify Color: 0 0 255

Safety Color: 255 99 71

Reset

Check: Check

Work Content: Work Content

Verify: Verify

Safety: Safety

Reset

Ok

Change colors





Change names

Visual Documentation

Visual Method Sheets (VMS)

Check, Work Content, Verify & Safety Symbols

These are color blind symbols!

Visual INSTRUCTOR 4.0		TANK DEPARTMENT BONDING STATION			
5/3/18 Rev 1	Bonding tank halves together	△ Check	□ Work Content	○ Verify	◇ Safety
ISO 9000	Documentation: GB2006				
◇ 1	SAFETY: Wear safety GLOVES and GLASSES	Cycle	△ 2	Check WELDING BOND is GREY in color	Cycle
		2 sec			10 sec
					
□ 3	Squirt WELDING BOND on all TANK LIP edges of TANK	Cycle	○ 4	Verify that WELD is on CENTER of the tank lip as shown	Cycle
		25 sec			8 sec
					


Visual Documentation

Visual Instructor Formats

Visual Instructor Pro - Untitled*

File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

Image	Quality ▼	Page Type ▼	Task
1 	Work Content	4 Picture Landscape	

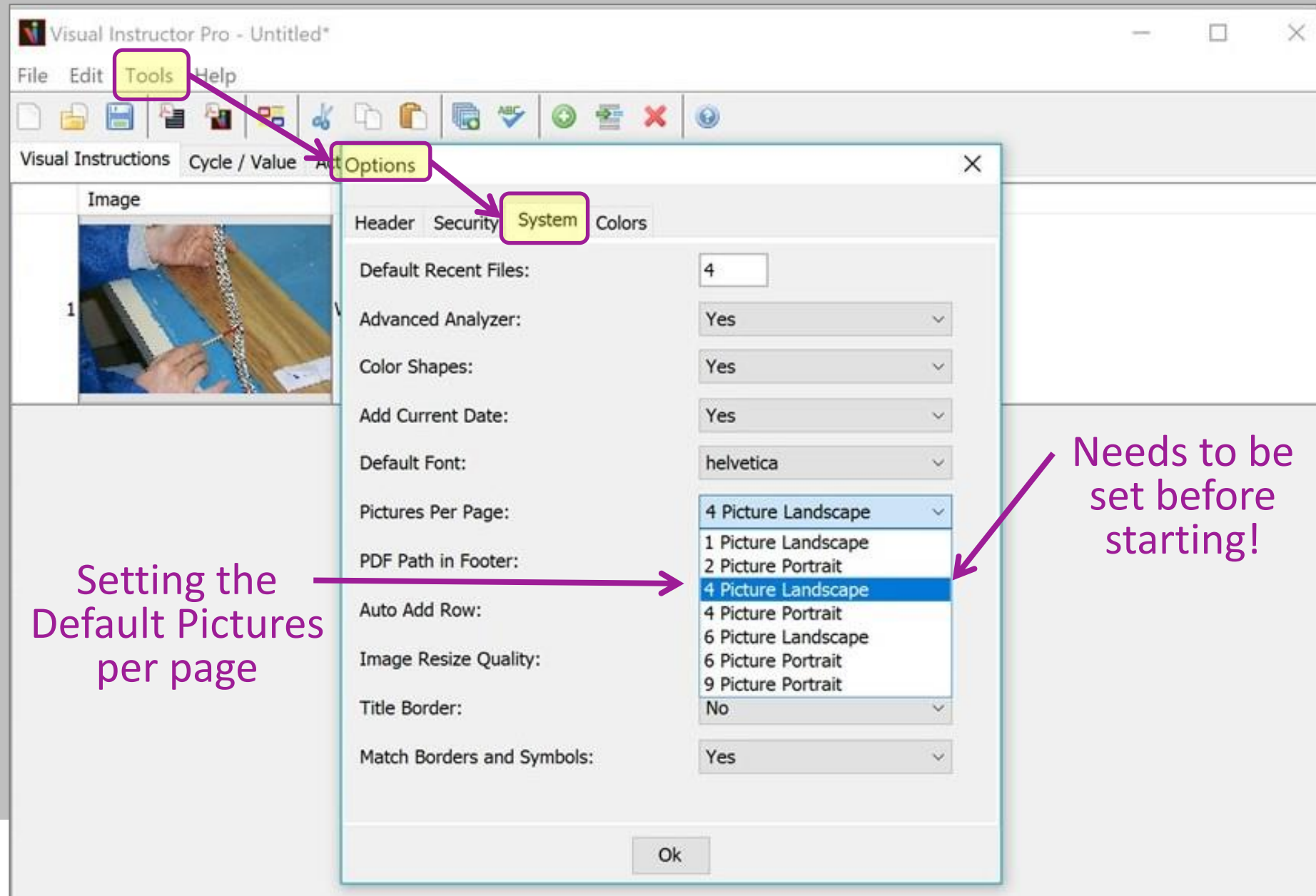
1 Picture Landscape
2 Picture Portrait
4 Picture Landscape
4 Picture Portrait
6 Picture Landscape
6 Picture Portrait
9 Picture Portrait

To change the **individual line** format, click your new format

To change from the **Page Default**, click your new format

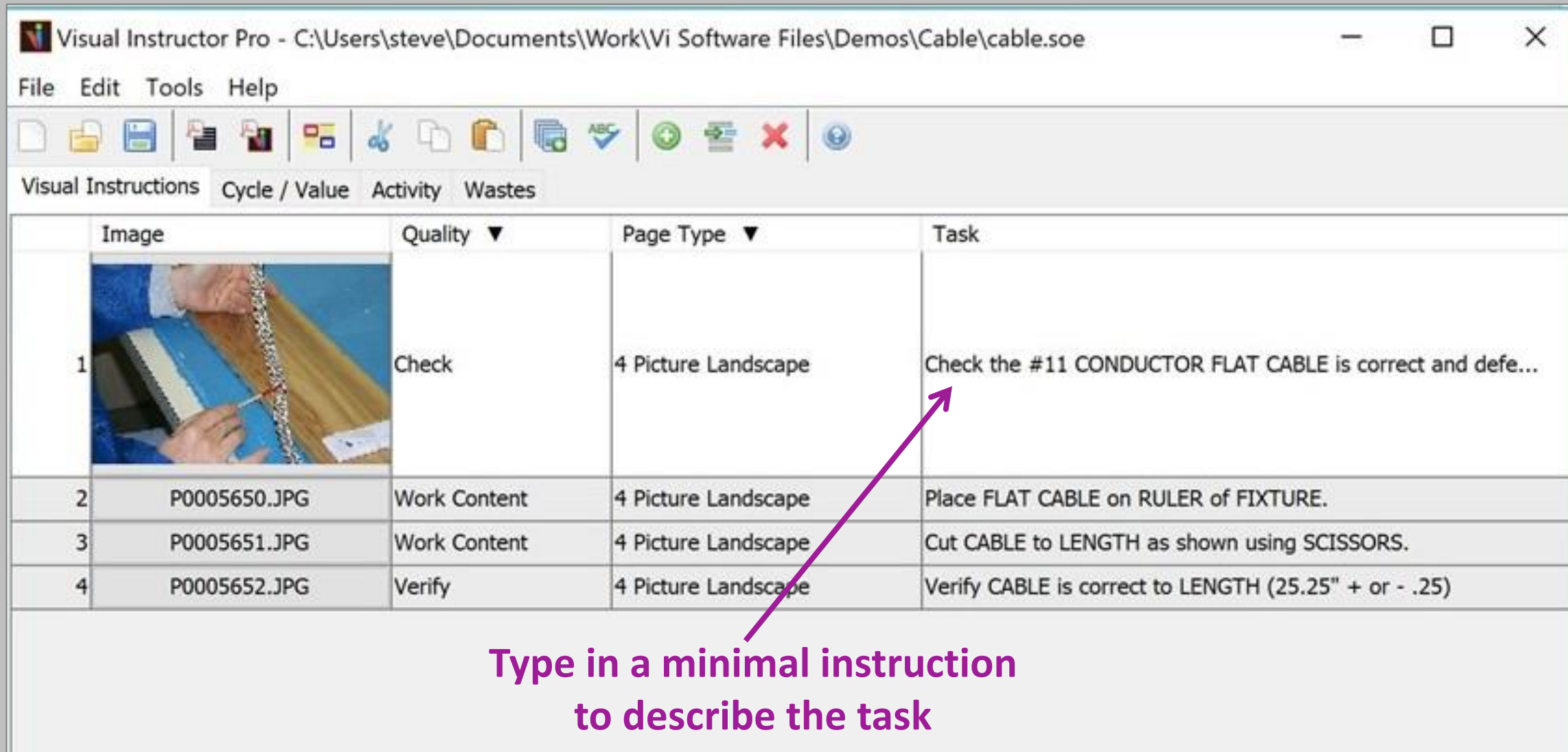
Visual Documentation

Visual Instructor Default Formats



Visual Documentation


Writing Minimal Instructions



Visual Instructor Pro - C:\Users\steve\Documents\Work\Vi Software Files\Demos\Cable\cable.soe

File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

	Image	Quality ▼	Page Type ▼	Task
1		Check	4 Picture Landscape	Check the #11 CONDUCTOR FLAT CABLE is correct and defe...
2	P0005650.JPG	Work Content	4 Picture Landscape	Place FLAT CABLE on RULER of FIXTURE.
3	P0005651.JPG	Work Content	4 Picture Landscape	Cut CABLE to LENGTH as shown using SCISSORS.
4	P0005652.JPG	Verify	4 Picture Landscape	Verify CABLE is correct to LENGTH (25.25" + or - .25)

Type in a minimal instruction
to describe the task

Visual Documentation

Writing Minimal Instructions:

Verb **NOUNS** with **NOUNS** using **NOUNS**. (part) (part) (tools)

- Start each sentence with an *action verb*.
- Start each sentence with “**Check**” if operator is checking someone else’s work or raw material.
- Start each sentence with “**Verify**” if operator is verifying their own work.
- Precede **TOOLS** or special techniques with the word “using.”
- Use “**as shown**” if a picture can better describe how something is done.

Visual Documentation

Writing Minimal Instructions:

Verb NOUNS with NOUNS using NOUNS.
(part) (part) (tools)

Example:

Attach FRONT COPY to PACKET using STAPLER.

Note: The Caps and Lower case to Optimize fast reading!

Visual Documentation

Writing Minimal Instructions:

Verb **NOUNS** with **NOUNS** using **NOUNS**.

(part)

(part)

(tools)

Examples:

- Attach FRONT COPY to PACKET using STAPLER.
- Write PERMIT # LABEL using PERMIT # LABEL TEMPLATE as shown.
- Apply ADHESIVE to back of CUSTOMER LABEL using SPRAY ADHESIVE.
- Check that **INFORMATION** is filled out on **APPLICATION**.

Visual Documentation

Successful Writing of SOE

Too Much:

“Fill in each BLANK SPACE in the kit using your PENCIL and visually inspect it, verifying it to make sure each BLANK on the PAGE is FILLED OUT.”

Too Little:

“Check your BLANKS.”

Proper Detail:

Check the BLANKS are filled out with INFORMATION as shown.





Visual Documentation

Using Caps and Lower Case

Visual
INSTRUCTOR 4.0

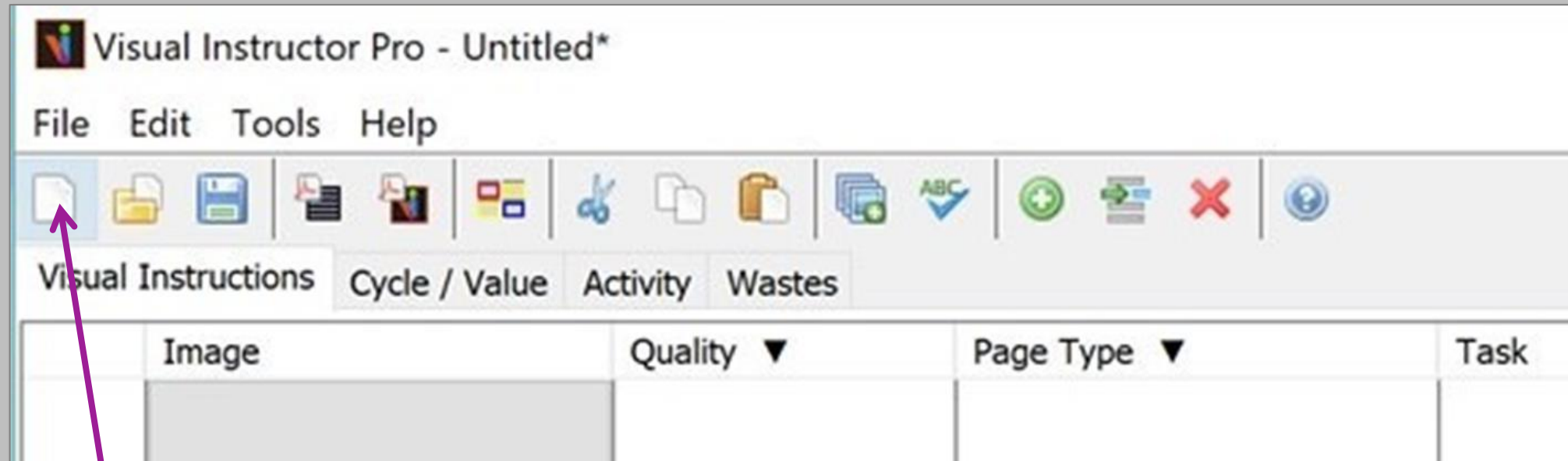
Visual Work Instructions
Cable Assembly (Courtesy of BQE)

Cable Cutting Department, Longmont, Colorado	ISO9001-000101	<input checked="" type="checkbox"/> Check <input type="checkbox"/> Work Content <input type="checkbox"/> Verify <input type="checkbox"/> Safety
Rev. 1.0	This process demonstrates how we cut a 123 Cable	

1	Check the #11 CONDUCTOR FLAT CABLE is correct and defective free.	Cycle 12 sec
		
2	Place FLAT CABLE on RULER of FIXTURE.	Cycle 14 sec
		
3	Cut CABLE to LENGTH as shown using SCISSORS.	Cycle 5 sec
		
4	Verify CABLE is correct to LENGTH (25.25" + or - .25)	Cycle 12 sec
		

Visual Documentation

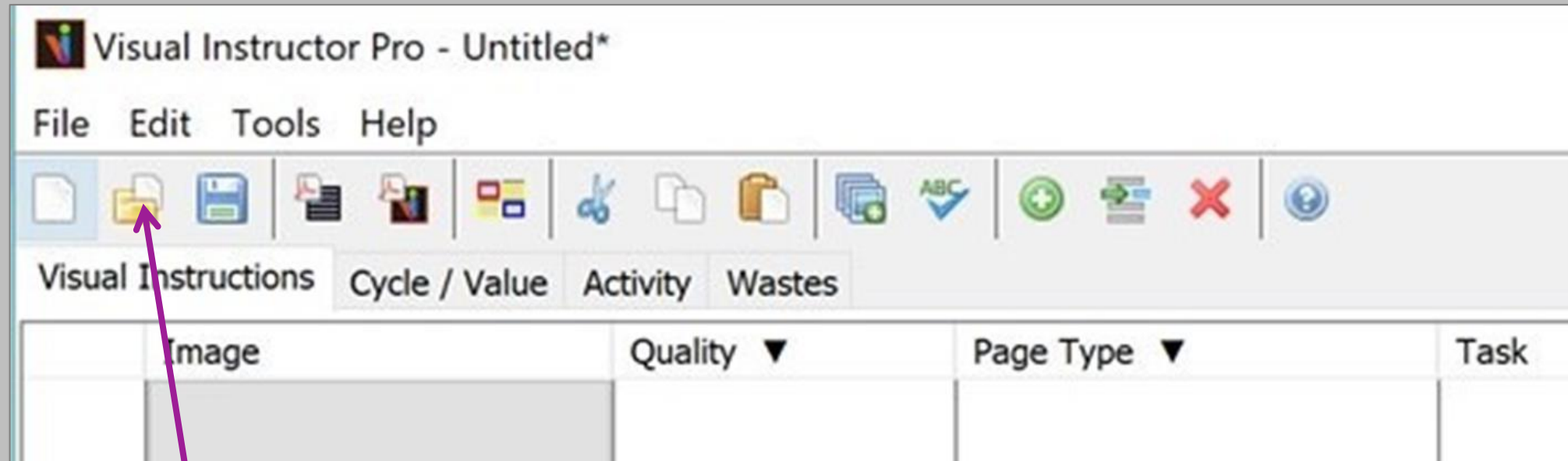
Using the Tool Bar



New File

Visual Documentation

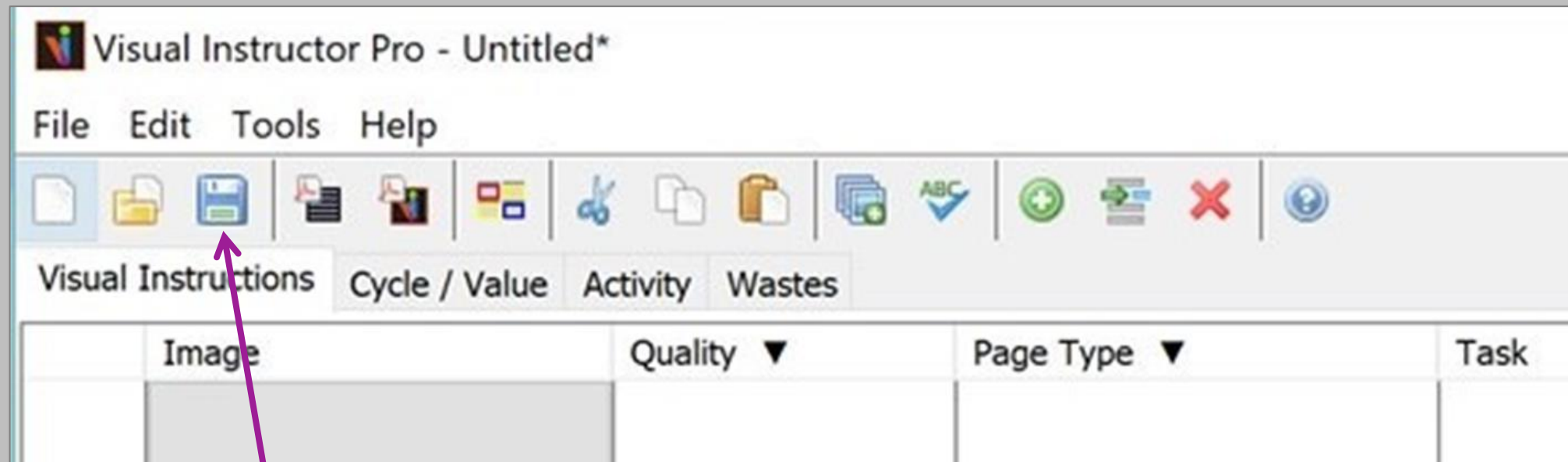
Using the Tool Bar



Open an Existing File

Visual Documentation

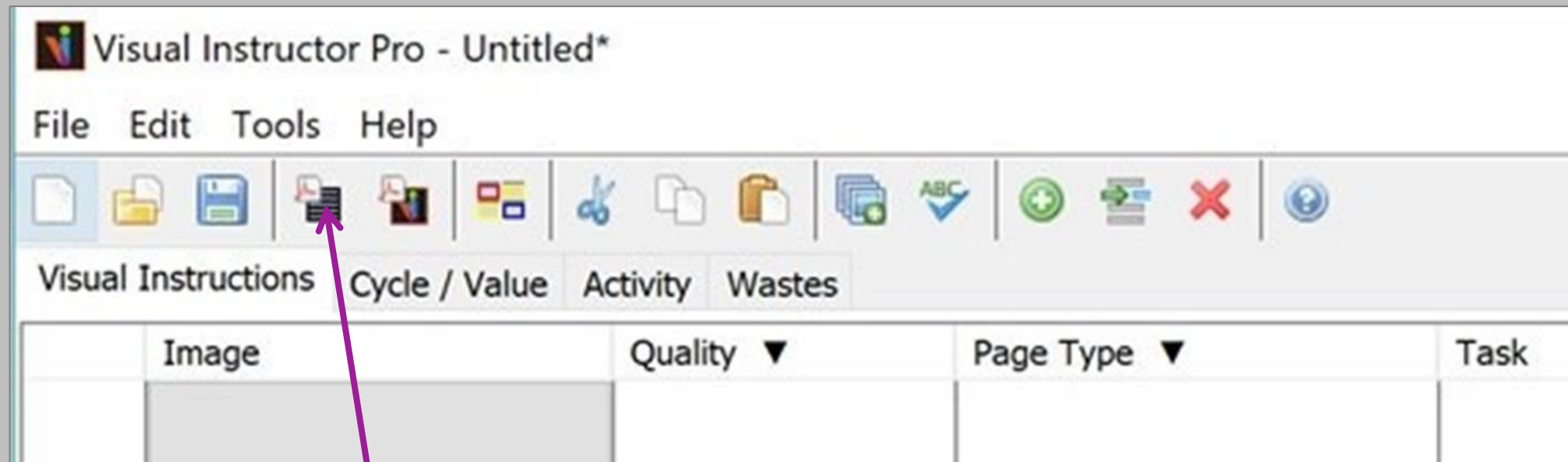
Using the Tool Bar



Save File

Visual Documentation

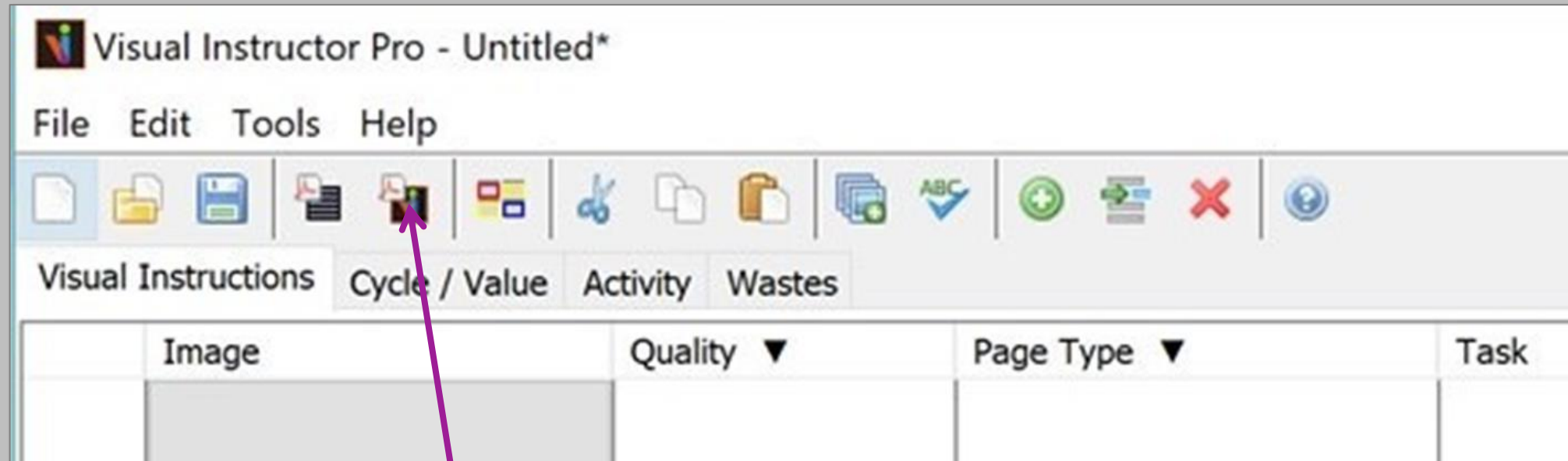
Using the Tool Bar



Create SOE

Visual Documentation

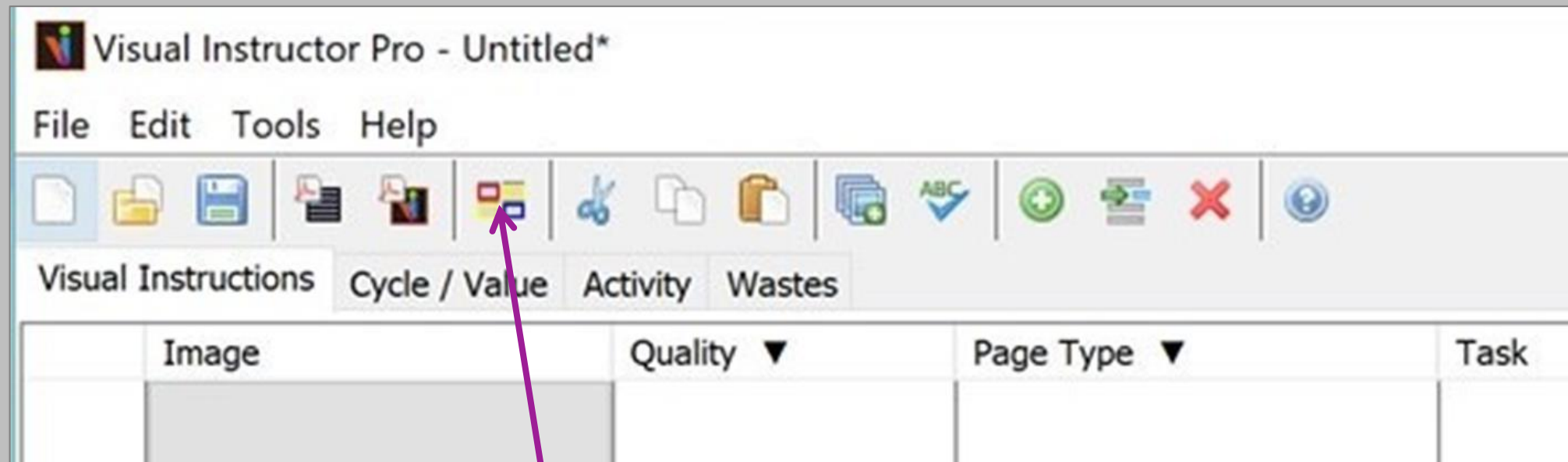
Using the Tool Bar



Create VWI

Visual Documentation

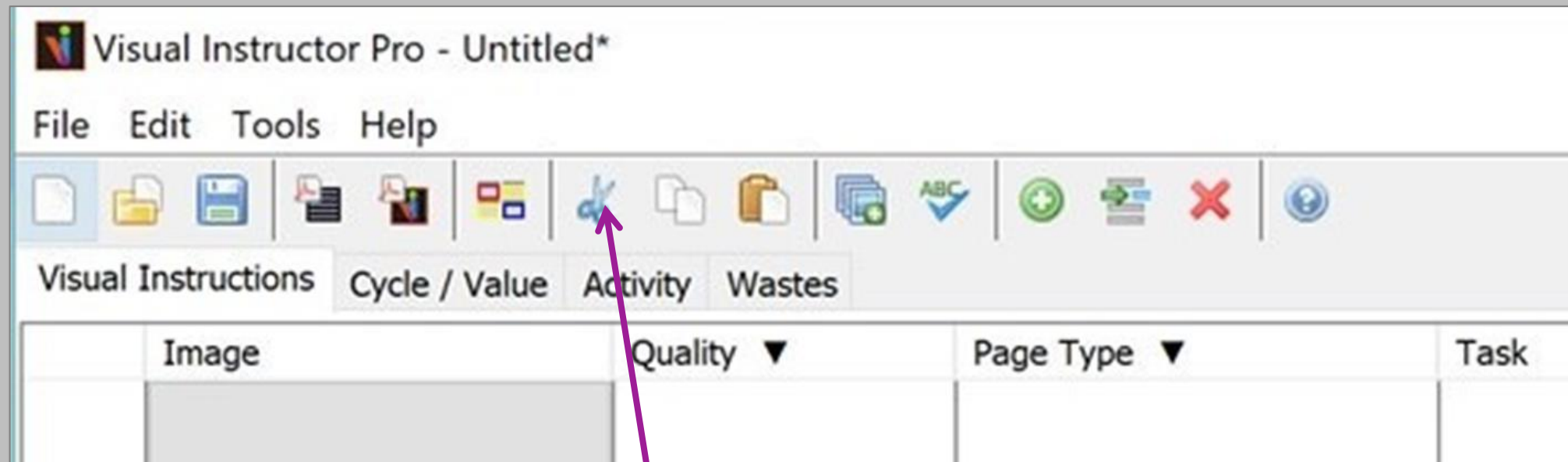
Using the Tool Bar



Turn On/Off
the Quality
Symbols

Visual Documentation

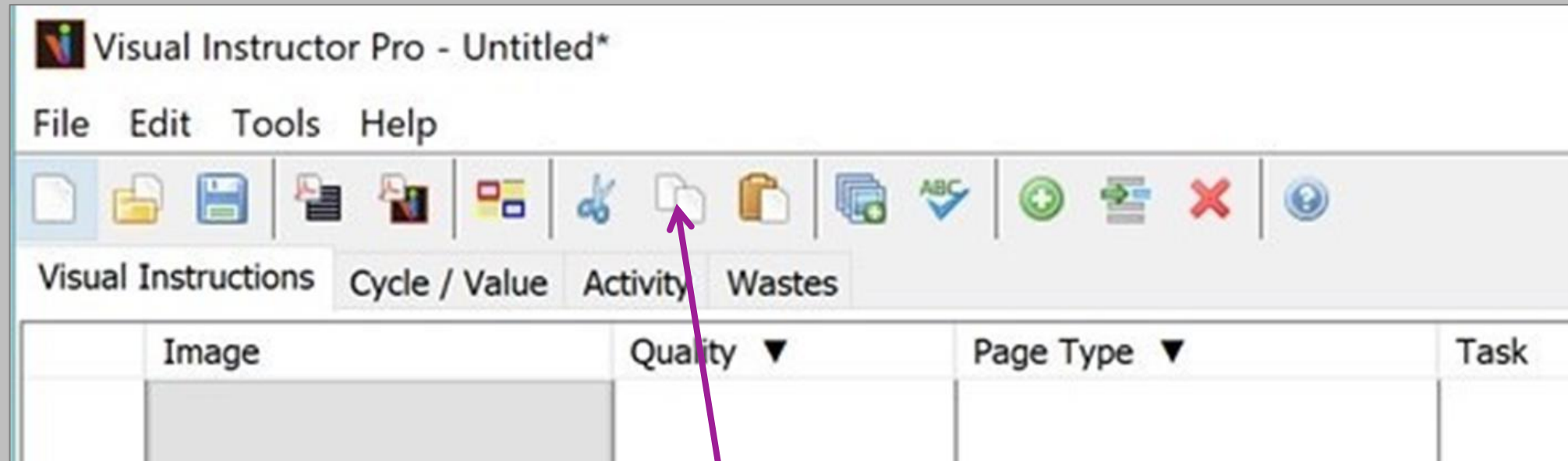
Using the Tool Bar



Cut Text

Visual Documentation

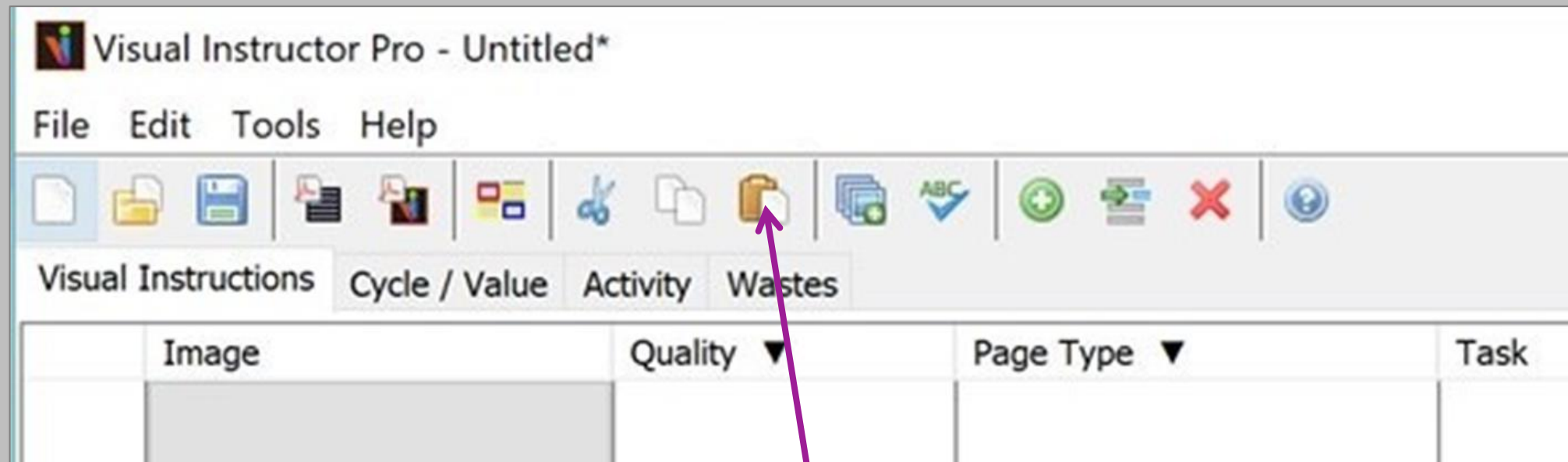
Using the Tool Bar



Copy Text

Visual Documentation

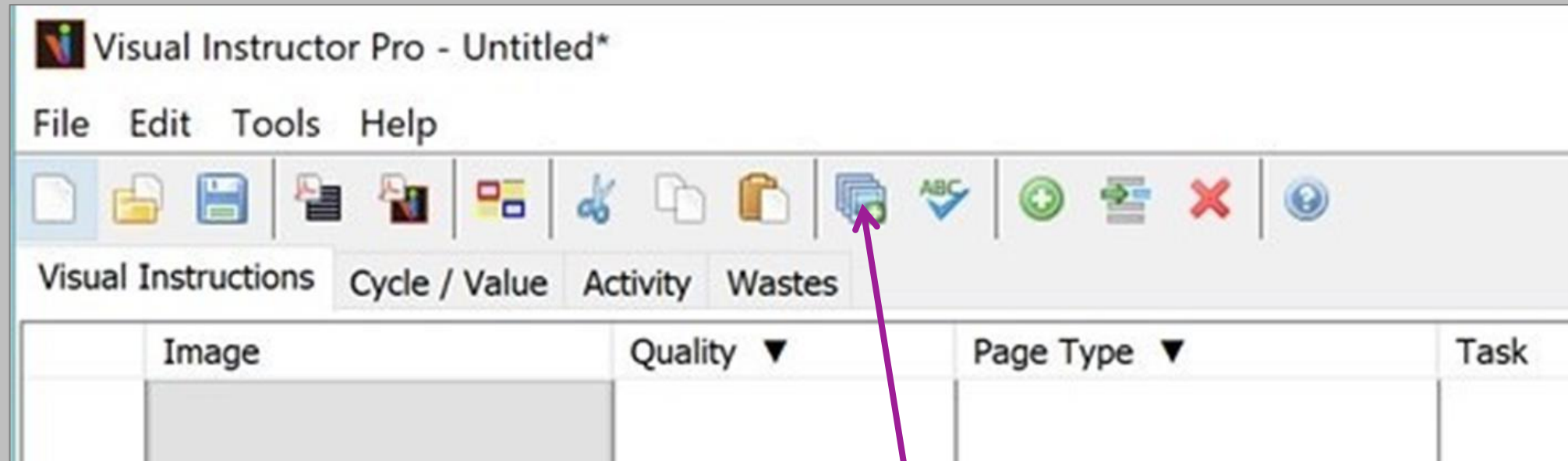
Using the Tool Bar



Paste text
(a row or multiple rows)

Visual Documentation

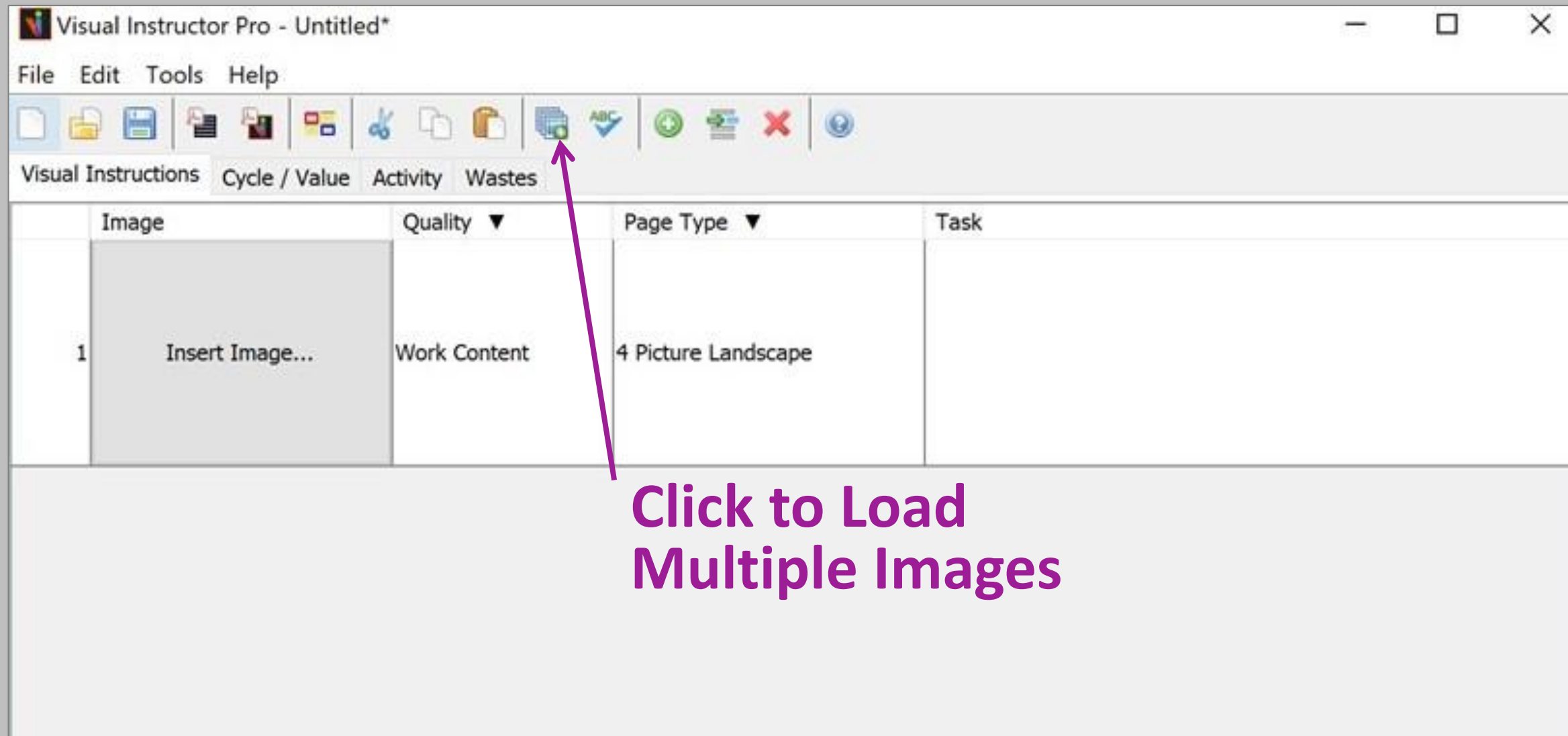
Using the Tool Bar



Import Multiple Images
at One Time

Visual Documentation

Importing Multiple Images



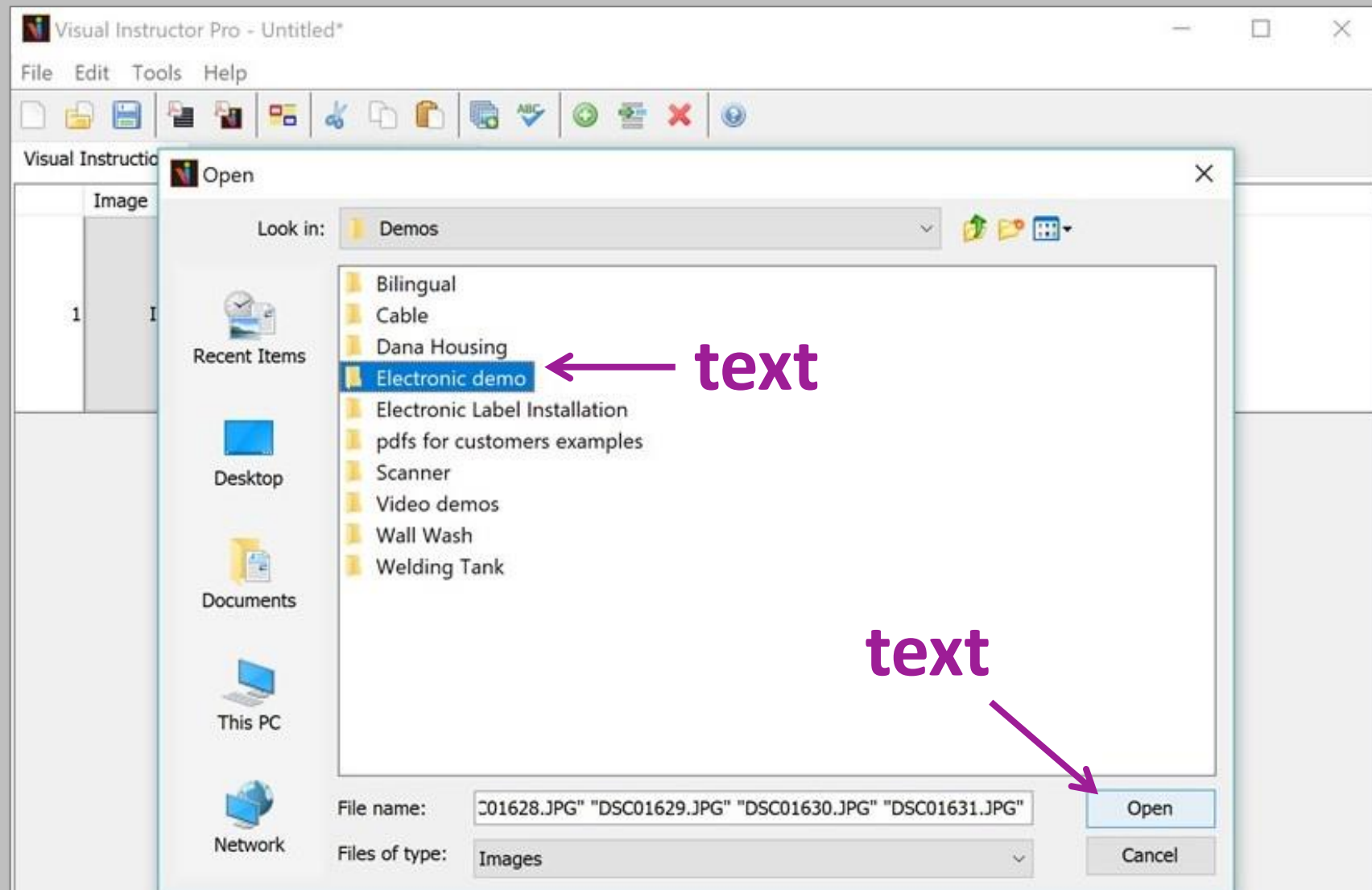
The screenshot shows the Visual Instructor Pro software interface. The window title is "Visual Instructor Pro - Untitled*". The menu bar includes "File", "Edit", "Tools", and "Help". The toolbar contains various icons, including a "Load Multiple Images" icon (a blue document with a green plus sign) which is highlighted by a purple arrow. Below the toolbar is a table with the following columns: "Image", "Quality", "Page Type", and "Task". The table contains one row with the following data:

	Image	Quality ▼	Page Type ▼	Task
1	Insert Image...	Work Content	4 Picture Landscape	

Click to Load Multiple Images

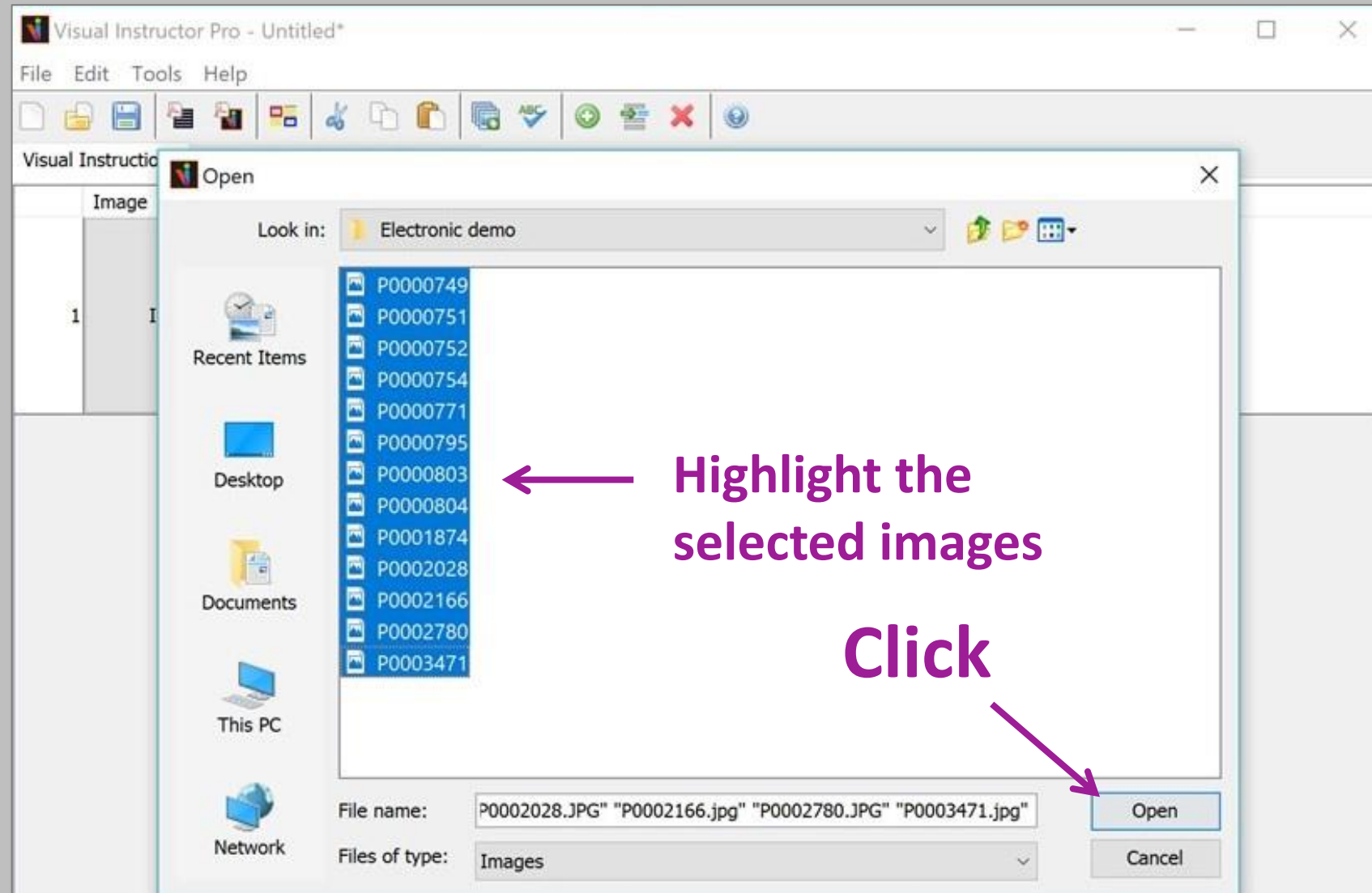
Visual Documentation

Importing Multiple Images



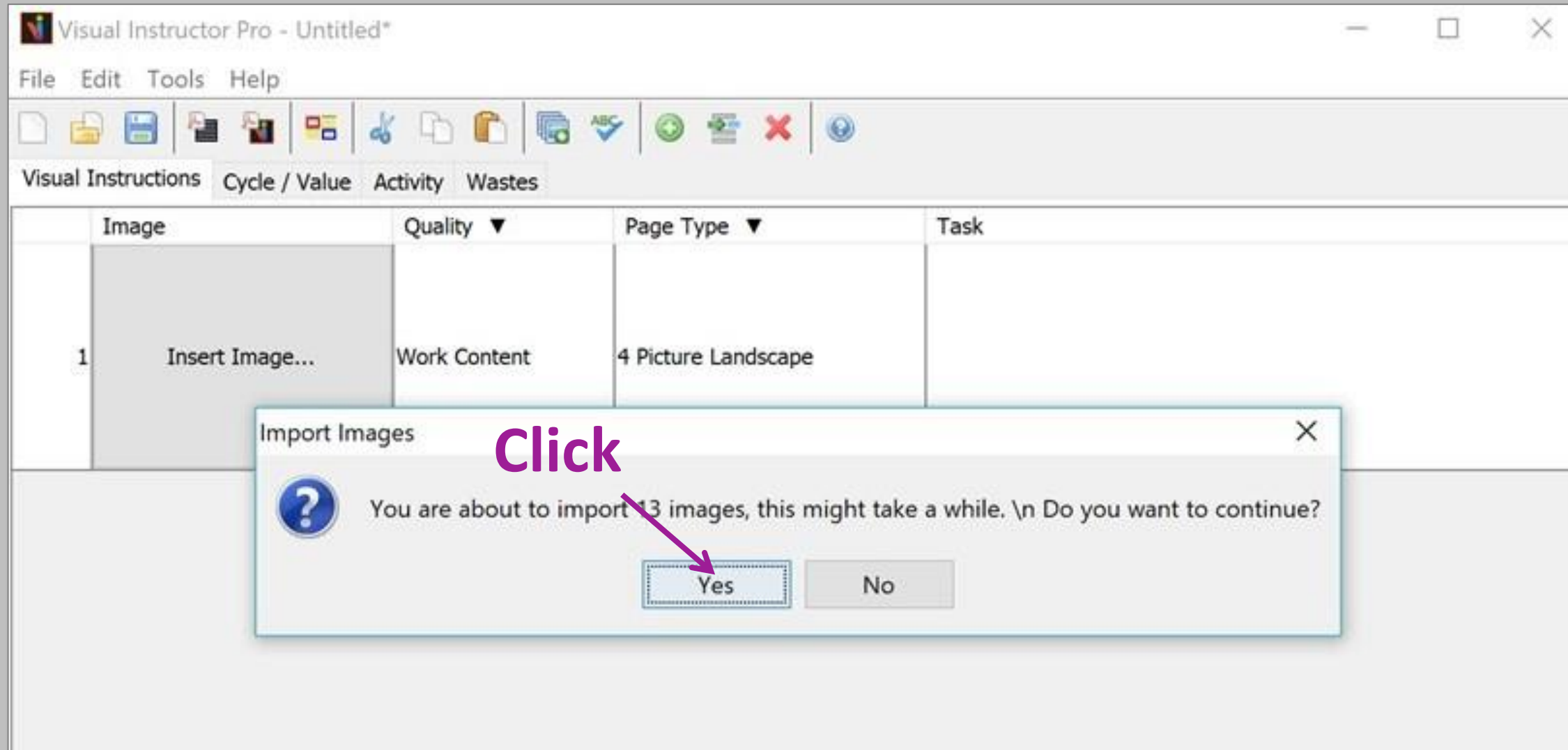
Visual Documentation

Importing Multiple Images



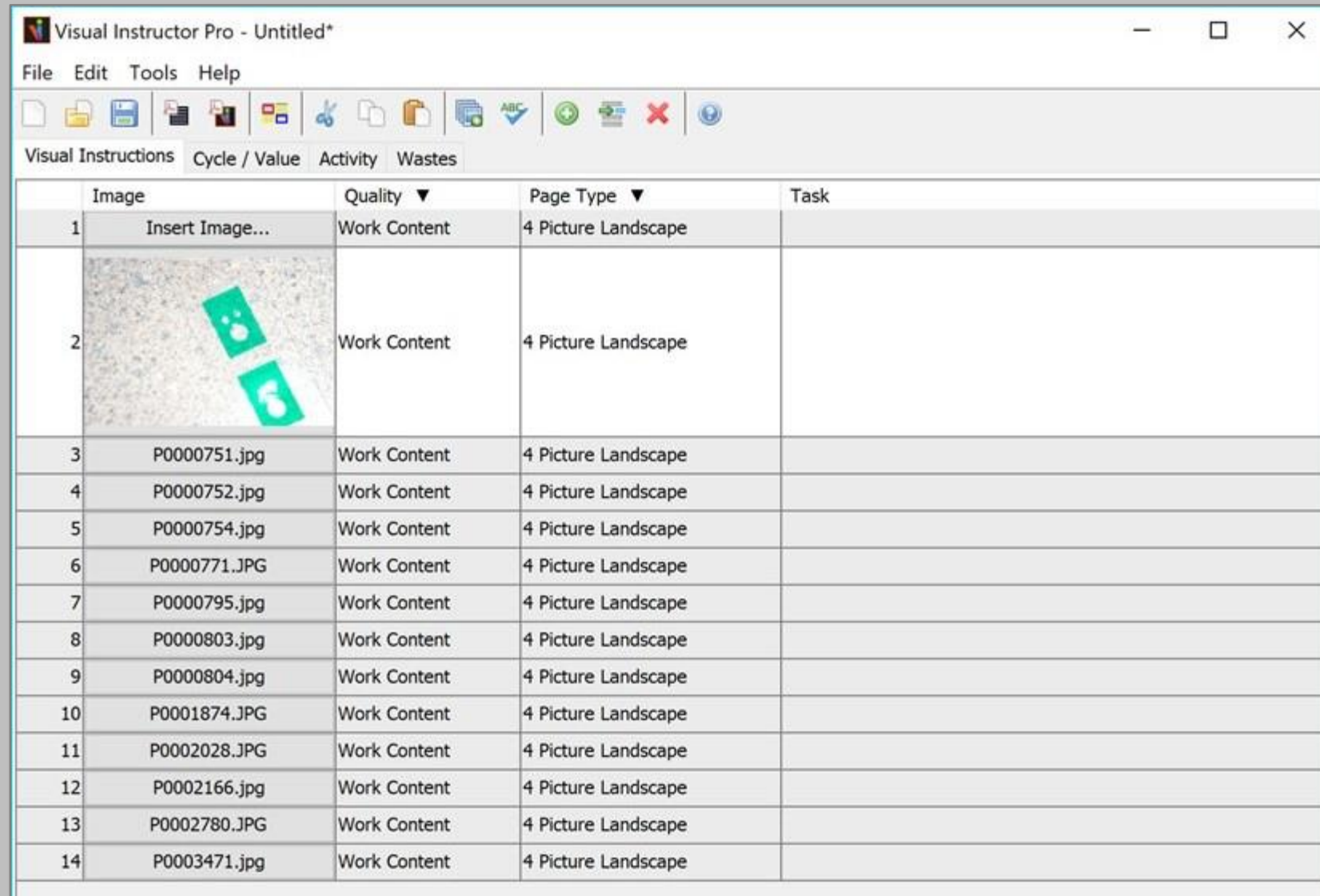
Visual Documentation

Importing Multiple Images




Visual Documentation

Importing Multiple Images

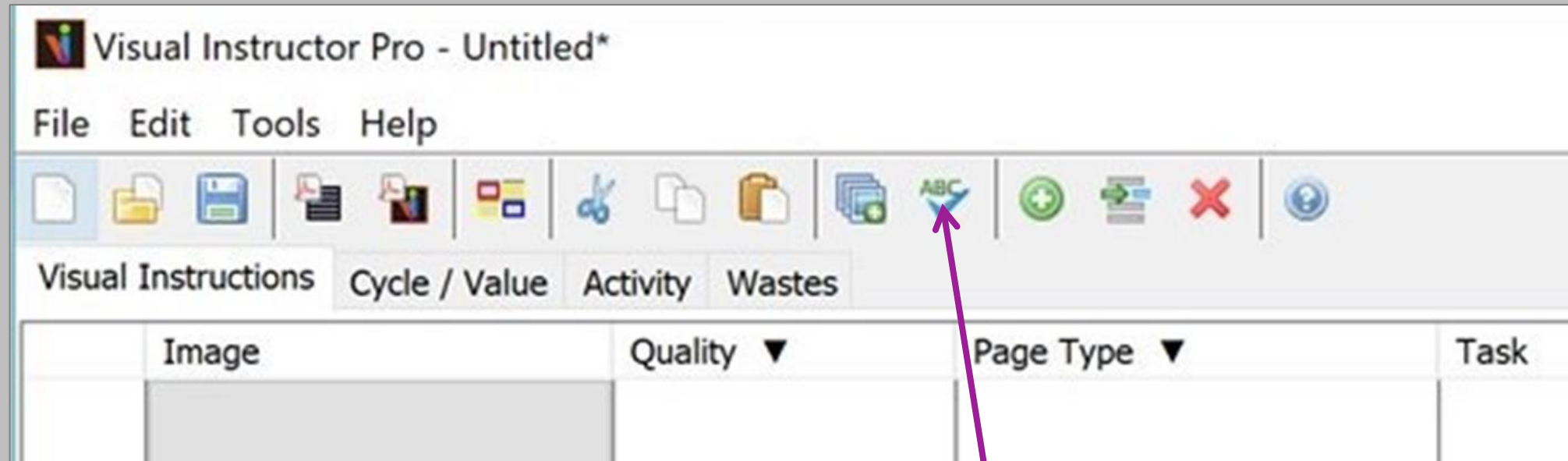


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	Image	Quality ▼	Page Type ▼	Task
1	Insert Image...	Work Content	4 Picture Landscape	
2		Work Content	4 Picture Landscape	
3	P0000751.jpg	Work Content	4 Picture Landscape	
4	P0000752.jpg	Work Content	4 Picture Landscape	
5	P0000754.jpg	Work Content	4 Picture Landscape	
6	P0000771.JPG	Work Content	4 Picture Landscape	
7	P0000795.jpg	Work Content	4 Picture Landscape	
8	P0000803.jpg	Work Content	4 Picture Landscape	
9	P0000804.jpg	Work Content	4 Picture Landscape	
10	P0001874.JPG	Work Content	4 Picture Landscape	
11	P0002028.JPG	Work Content	4 Picture Landscape	
12	P0002166.jpg	Work Content	4 Picture Landscape	
13	P0002780.JPG	Work Content	4 Picture Landscape	
14	P0003471.jpg	Work Content	4 Picture Landscape	

Visual Documentation

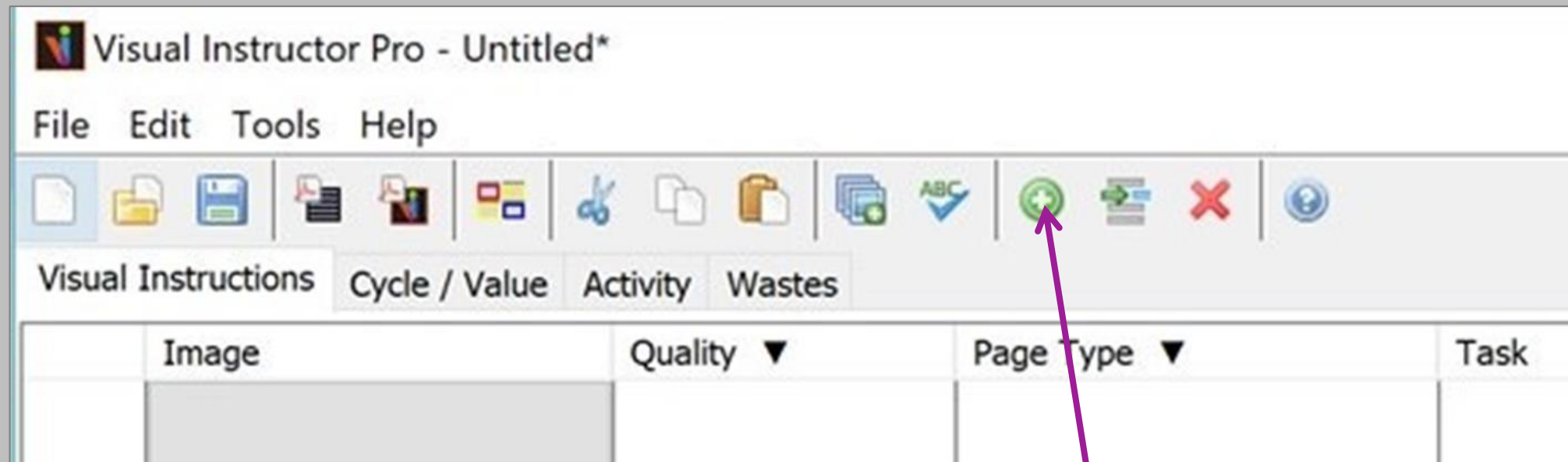
Using the Tool Bar



Spell Check

Visual Documentation

Using the Tool Bar

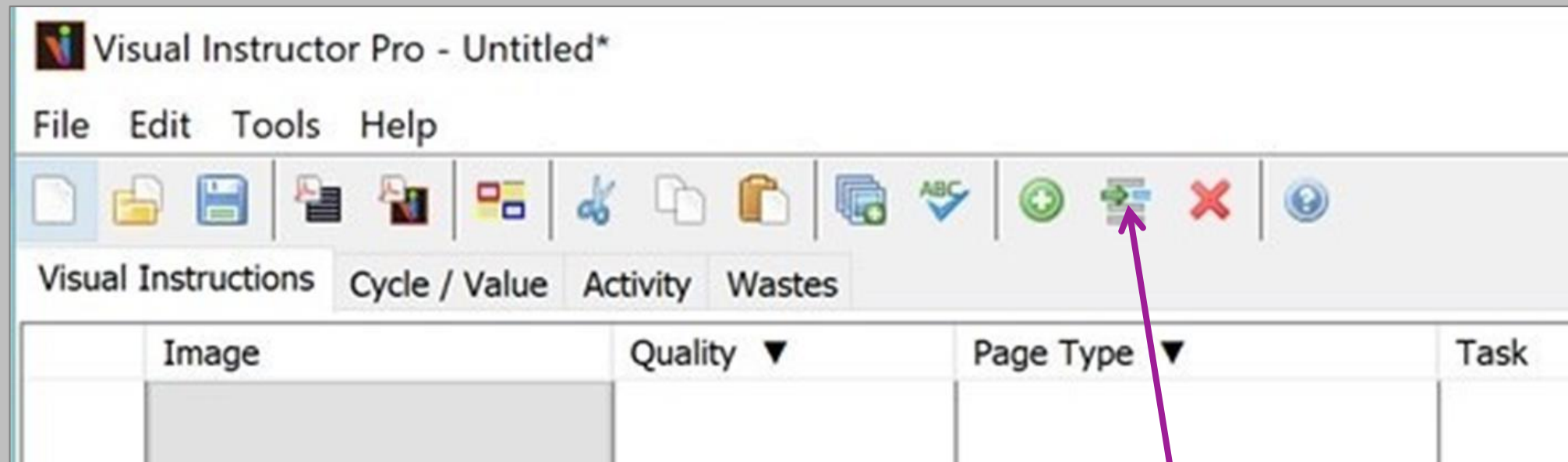


Add Row

or you can press "Enter" at the end of your sentence

Visual Documentation

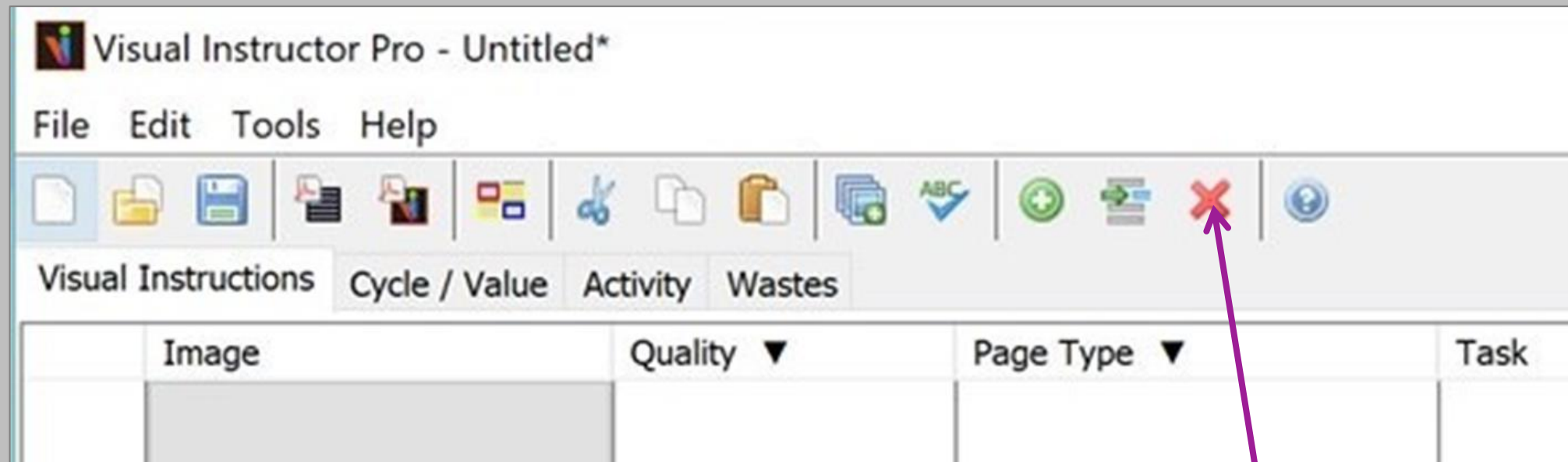
Using the Tool Bar



Insert Row "Above"

Visual Documentation

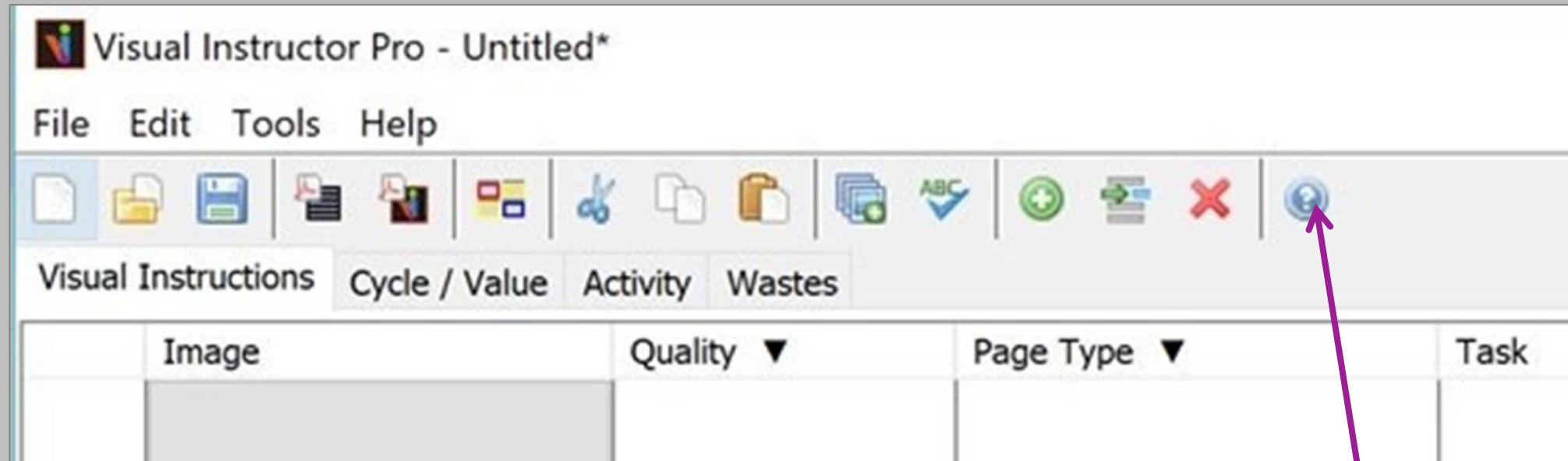
Using the Tool Bar



Delete Row(s)
or Text

Visual Documentation

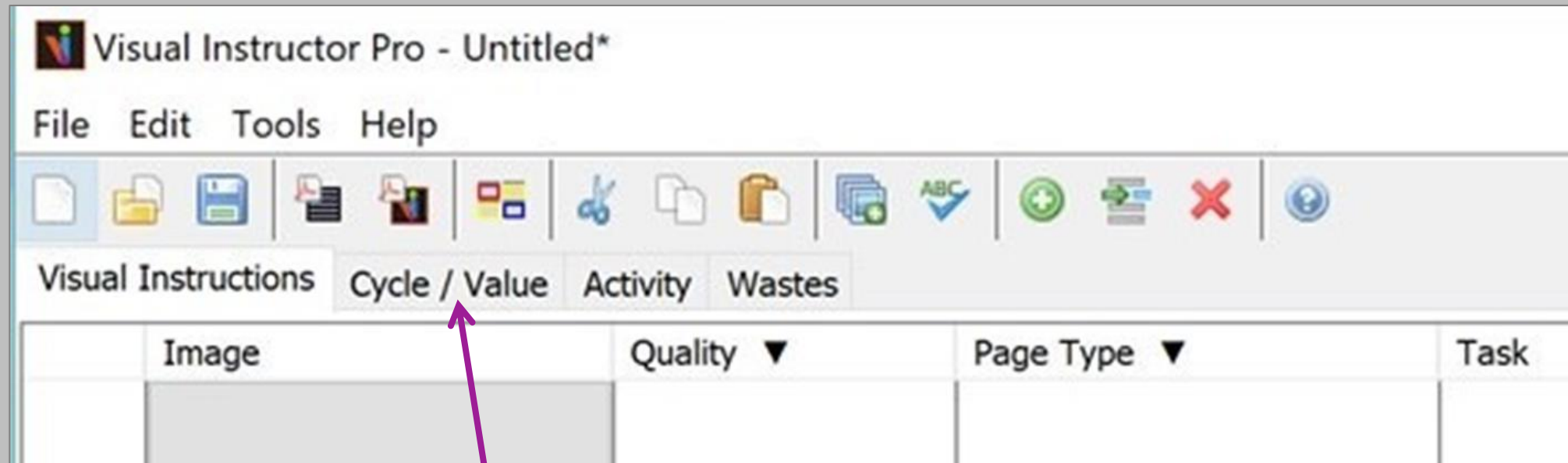
Adding Cycle Times



Online Help Menu

Visual Documentation

Adding Cycle Times



Click on Cycle / Value

Visual Instructor Pro - C:\Users\steve\Documents\Work\BA Software\Customer Files\Harvest Fellowship\setting interi...

File Edit Tools Help

Visual Instructions Cycle / Value Activity Wastes

Task	Cycle Time	Value Added
1 Locate the Alarm at either side doors	5 sec	<input type="checkbox"/>
2 Press COMMAND BUTTON	2 sec	<input type="checkbox"/>
3 Panel Reads: ARM or DISARM	2 sec	<input type="checkbox"/>
4 Press ARM BUTTON	2 sec	<input type="checkbox"/>
5 Panel reads ALL, NO, OR YES	2 sec	<input type="checkbox"/>
6 Press NO BUTTON	2 sec	<input type="checkbox"/>
7 Panel Reads: PERIMETER AREA: NO or YES	2 sec	<input type="checkbox"/>
8 Press NO	2 sec	<input type="checkbox"/>
9 Panel Reads: INTERIOR AREA: NO or YES	4 sec	<input type="checkbox"/>
10 Press YES	2 sec	<input type="checkbox"/>
11 Panel Reads: HARVEST SYSTEM ON	4 sec	<input type="checkbox"/>
12 PANEL PROCESS FOR ARMING IS COMPLETE	0 sec	<input type="checkbox"/>



Enter time for each event

erase me.pdf x +

File | C:/Users/steve/Documents/erase%20me.pdf

Dell

1 of 2

Setting the Interior Setting on Alarm Only

4/27/2021	Authors: Gordon Lang & Steve Blackwell	<input checked="" type="checkbox"/> Check	<input type="checkbox"/> Work Content	<input type="checkbox"/> Verify	<input checked="" type="checkbox"/> Safety
Rev 1	Reason: Exterior setting fails				

1	Locate the Alarm at either side doors	Cycle 5 sec	2	Press COMMAND BUTTON	Cycle 2 sec
3	Panel Reads: ARM or DISARM	Cycle 2 sec	4	Press ARM BUTTON	Cycle 2 sec

89°F Sunny 11:34 AM 7/22/2022

Visual Documentation

Creating Visual Work Instructions (VWI)

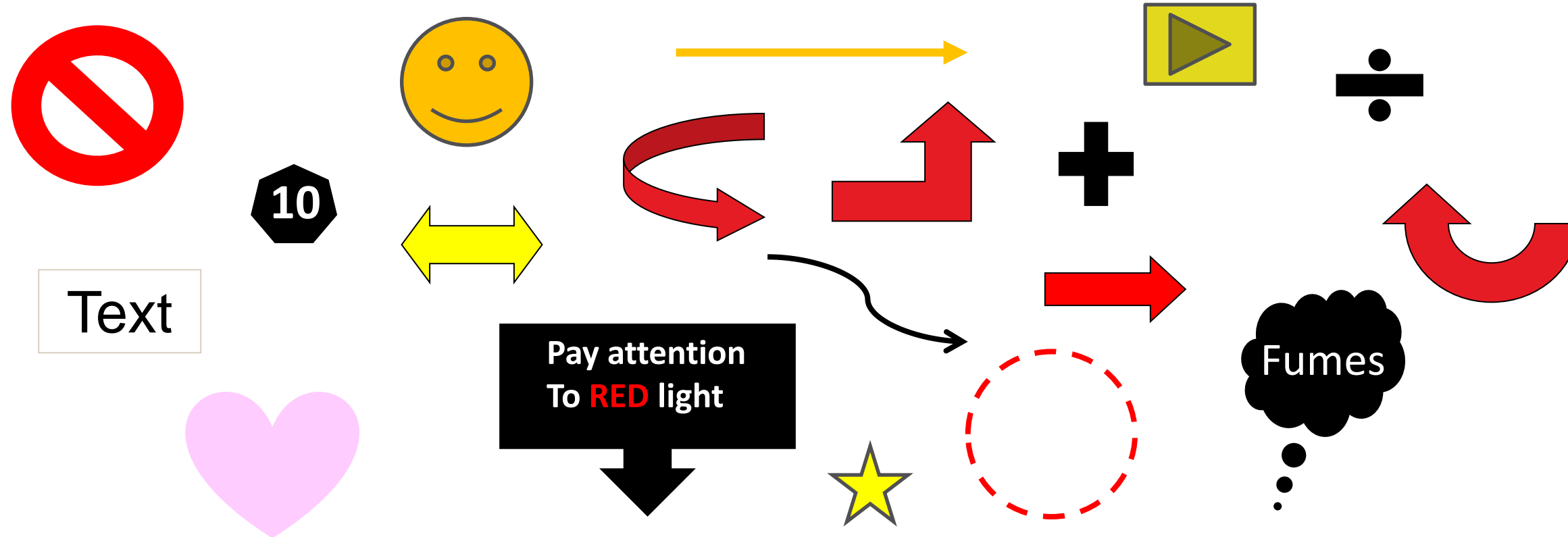
To create accurate Documentation, you may need to schedule several builds.

- **Build #1a:** Create the first draft of the VWI.
- **Build #1b:** Verify the first draft is correct, using the VWI as a script for an operator.
- **Build #1c:** Correct any images or instructions
- **Build #2:** Repeat same process with a different Operator as above.
- **Meeting #3:** Meet with people who have a vested interest for final agreement of document
- **Quality Dept. #4:** Submit document for approval and entry into company documentation system.

Visual Documentation

Using PowerPoint® to modify images

If needed, modify images with text or a drawing/symbols such as an arrow, line, text box and even clip art to communicate the task.



Visual Documentation

Using PowerPoint to modify images

If needed, you can use an arrow to indicate direction.



Visual Documentation

Using PowerPoint to modify images

However, as much as possible, the **GOAL** is not to modify images.
Modification takes more time!



Visual Documentation

Creating Headers and Footers

The screenshot shows the Visual Instructor Pro software interface. The 'Tools' menu is highlighted in yellow, and an arrow points to the 'Options' dialog box. The 'Options' dialog box has a 'Header' tab selected, which is also highlighted in yellow. The dialog box contains the following fields:

- Title: Visual Work Instructions
- Subtitle: Cable Assembly (Courtesy of BQE)
- Row 2 Box 1: Cable Cutting Department, Longmont, Colorado
- Row 2 Box 2: ISO9001-000101
- Row 3 Box 1: Rev. 1.0
- Row 3 Box 2: This process demonstrates how we cut a 123 Cable
- Footer: Uncontrolled Document
- Path to Logo: C:\Users\steve\Desktop\Visual Instructor_4.png
- Remember Header

The background shows a table with image references:

Image
1
2 P0005650.JPG
3 P0005651.JPG
4 P0005652.JPG

Visual Documentation







← Path to Logo



TITLE
SUBTITLE

Row 2, Box 1	Row 2, Box 2	<input checked="" type="checkbox"/> Check <input type="checkbox"/> Work Content <input type="checkbox"/> Verify <input checked="" type="checkbox"/> Safety
Row 3, Box 1	Row 3, Box 2	

	Check the #11 CONDUCTOR FLAT CABLE is correct and defective free.	Cycle
		12 sec
		

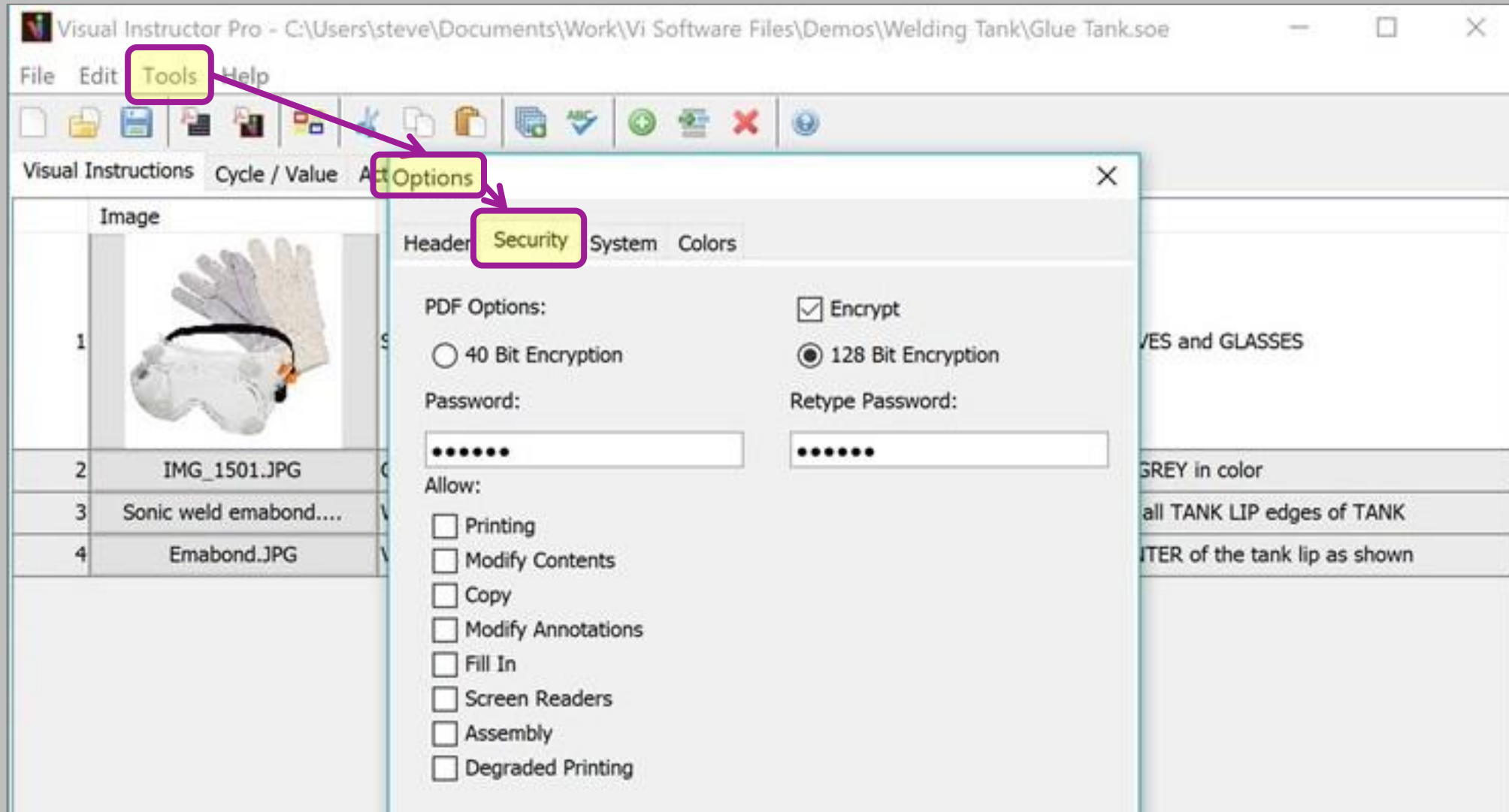
	Place FLAT CABLE on RULER of FIXTURE.	Cycle
		14 sec
		

	Cut CABLE to LENGTH as shown using SCISSORS.	Cycle
		5 sec
		

	Verify CABLE is correct to LENGTH (25.25" + or - .25)	Cycle
		12 sec
		

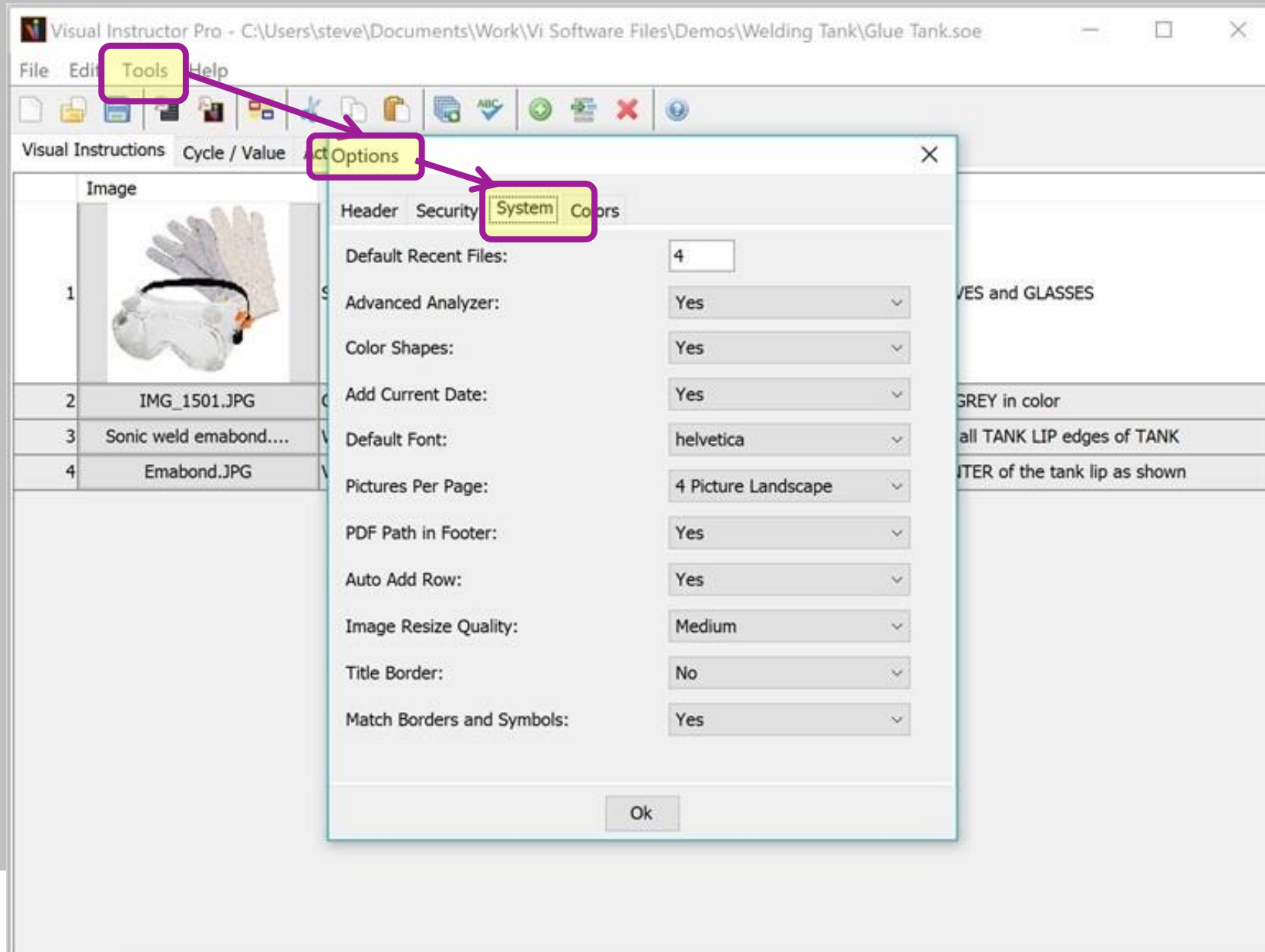
Visual Documentation

Creating Headers and Footers



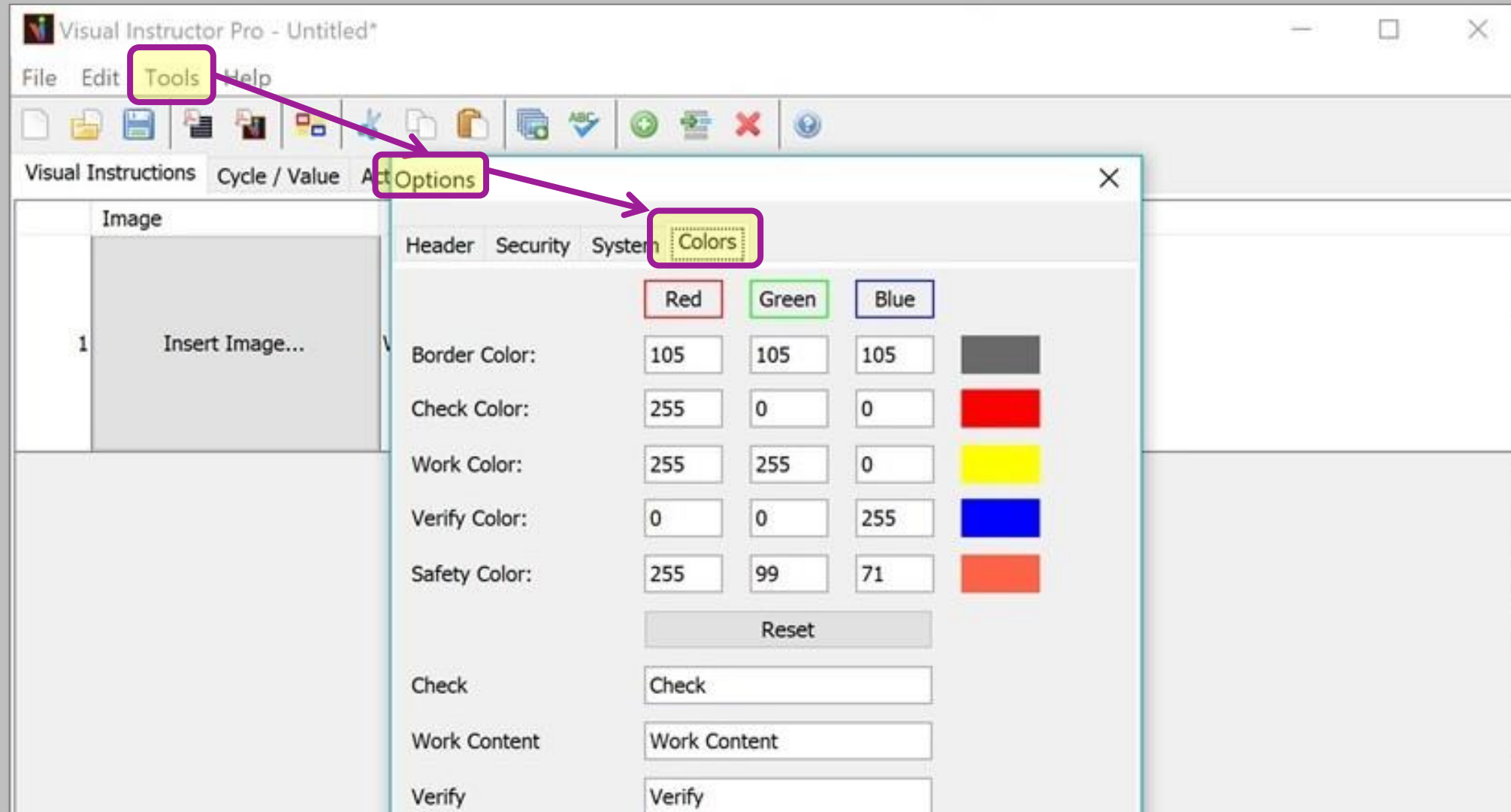
Visual Documentation

Creating Headers and Footers



Visual Documentation

Creating Headers and Footers



Visual Documentation

Process Improvement (constant)

*How to Use the Advanced Analyzer
for Process Improvement!*

Visual Documentation

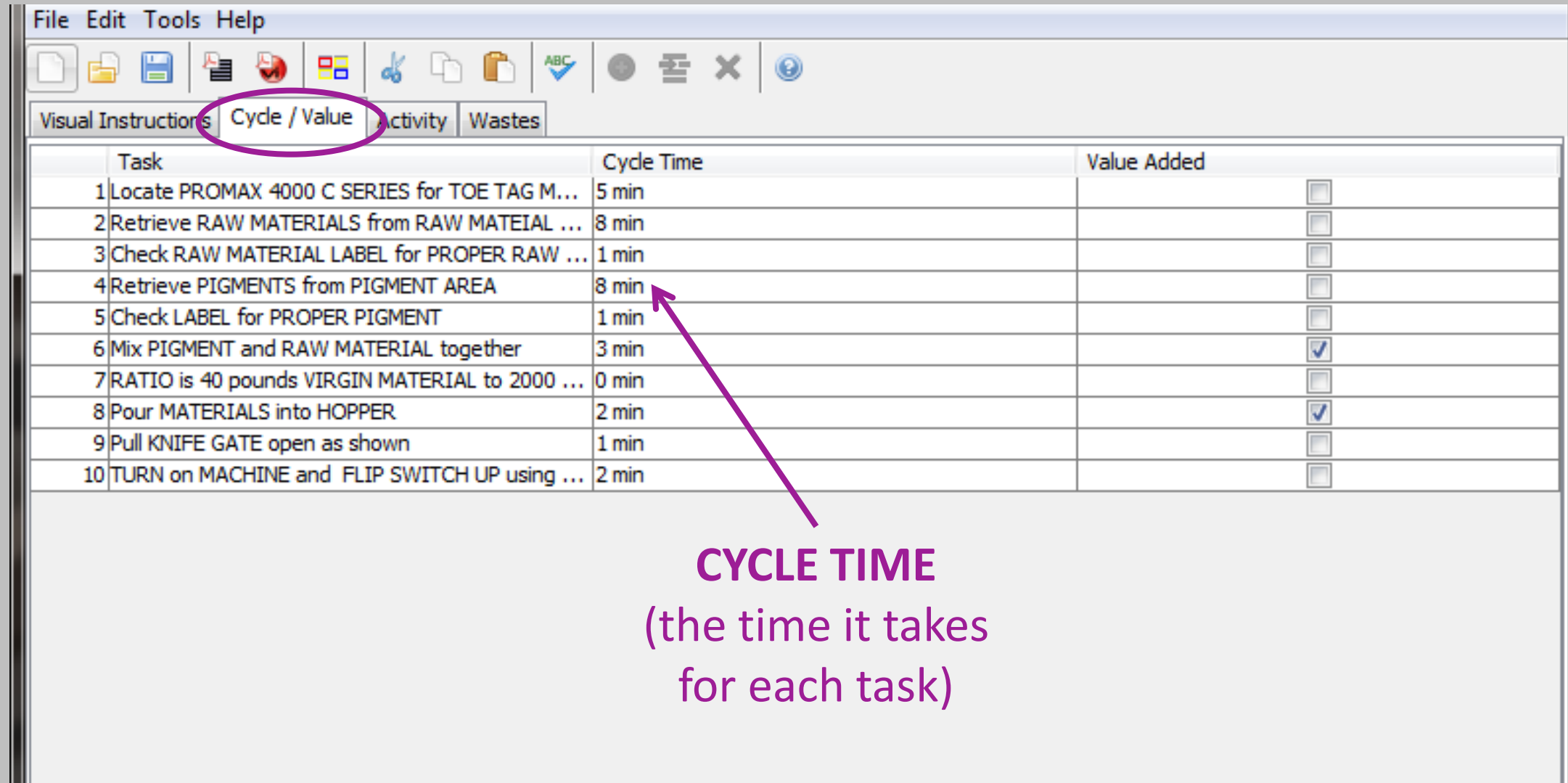
Advanced Analyzer

The screenshot displays the Visual Documentation software interface. The main window has a menu bar (File, Edit, Tools, Help) and a toolbar. Below the toolbar is a tabbed interface with 'Visual Instructions', 'Cycle / Value', 'Activity', and 'Wastes' tabs. The 'Visual Instructions' tab is active, showing a list of images (DSC00159.JPG, DSC00152.JPG, etc.) and a preview of the first image. An 'Options' dialog box is open, showing the 'System' tab. The 'Advanced Analyzer' option is set to 'Yes' and is highlighted with a yellow box. A purple circle highlights the 'Cycle / Value' tab in the main window, and a purple arrow points from this circle to the 'Advanced Analyzer' dropdown in the dialog box.

Image	Options
1 DSC00159.JPG	Header Security System
2	Default Recent Files: 4
3 DSC00152.JPG	Advanced Analyzer: Yes
4 DSC00156.JPG	Color Shapes: Yes
5 DSC00155.JPG	Add Current Date: Yes
6 DSC00157.JPG	Default Font: helvetica
7 DSC00157.JPG	Pictures Per Page: 4 Picture Landscape
8 DSC00159.JPG	PDF Path in Footer: Yes
9 DSC00160a.jpg	Auto Add Row: Yes
10 DSC00162a.jpg	Image Resize Quality: Medium

Visual Documentation

Advanced Analyzer



	Task	Cycle Time	Value Added
1	Locate PROMAX 4000 C SERIES for TOE TAG M...	5 min	<input type="checkbox"/>
2	Retrieve RAW MATERIALS from RAW MATEIAL ...	8 min	<input type="checkbox"/>
3	Check RAW MATERIAL LABEL for PROPER RAW ...	1 min	<input type="checkbox"/>
4	Retrieve PIGMENTS from PIGMENT AREA	8 min	<input type="checkbox"/>
5	Check LABEL for PROPER PIGMENT	1 min	<input type="checkbox"/>
6	Mix PIGMENT and RAW MATERIAL together	3 min	<input checked="" type="checkbox"/>
7	RATIO is 40 pounds VIRGIN MATERIAL to 2000 ...	0 min	<input type="checkbox"/>
8	Pour MATERIALS into HOPPER	2 min	<input checked="" type="checkbox"/>
9	Pull KNIFE GATE open as shown	1 min	<input type="checkbox"/>
10	TURN on MACHINE and FLIP SWITCH UP using ...	2 min	<input type="checkbox"/>

CYCLE TIME
(the time it takes
for each task)



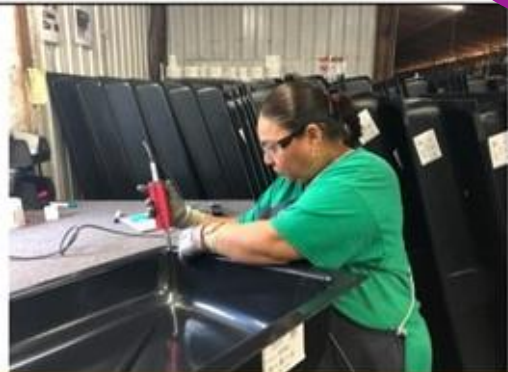

Visual Documentation

Advanced Analyzer

Visual
INSTRUCTOR 4.0

**TANK DEPARTMENT
BONDING STATION**

5/3/18 Rev 1	Bonding tank halves together	<input checked="" type="checkbox"/> Check <input type="checkbox"/> Work Content <input type="checkbox"/> Verify <input type="checkbox"/> Safety
ISO 9000	Documentation: GB2006	

1	SAFETY: Wear safety GLOVES and GLASSES	Cycle 2 sec
		
2	Check WELDING BOND is GREY in color	Cycle 10 sec
		
3	Squirt WELDING BOND on all TANK LIP edges of TANK	Cycle 25 sec
		
4	Verify that WELD is on CENTER of the tank lip as shown	Cycle 8 sec
		

Page 1 of 1 ...\Documents\Work\Vi Software Files\Demos\Welding Tank\Tank Welding .pdf 12/28/2018

Visual Documentation

Advanced Analyzer

Task	Cycle Time	Value Added
1 Locate PROMAX 4000 C SERIES for TOE TAG M...	5 min	<input type="checkbox"/>
2 Retrieve RAW MATERIALS from RAW MATEIAL ...	8 min	<input type="checkbox"/>
3 Check RAW MATERIAL LABEL for PROPER RAW ...	1 min	<input type="checkbox"/>
4 Retrieve PIGMENTS from PIGMENT AREA	8 min	<input type="checkbox"/>
5 Check LABEL for PROPER PIGMENT	1 min	<input type="checkbox"/>
6 Mix PIGMENT and RAW MATERIAL together	3 min	<input checked="" type="checkbox"/>
7 RATIO is 40 pounds VIRGIN MATERIAL to 2000 ...	0 min	<input type="checkbox"/>
8 Pour MATERIALS into HOPPER	2 min	<input checked="" type="checkbox"/>
9 Pull KNIFE GATE open as shown	1 min	<input type="checkbox"/>
10 TURN on MACHINE and FLIP SWITCH UP using ...	2 min	<input type="checkbox"/>

Value Added:
Any action that the customer would pay for in the production of a product.

Non Value Added:
Any action that the customer would not want to pay for.

Visual Documentation

Advanced Analyzer

Task	Overproduction	Overprocessing	Waiting	Transport	Inventory	Movement	Defects
1 Locate PROMAX 4000 C ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Retrieve RAW MATERIA...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Check RAW MATERIAL L...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Retrieve PIGMENTS from...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Check LABEL for PROPE...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Mix PIGMENT and RAW ...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7 RATIO is 40 pounds VIR...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Pour MATERIALS into H...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Pull KNIFE GATE open as...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 TURN on MACHINE and ...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Overproduction
(product being produced more than required-creating excess inventory)
BOTTLENECK

Overprocessing
(produce wasted materials or are inefficient)

Waiting
(the process stops for some other process to complete)

Transport
(parts or inventory are moved from one physical location to another)

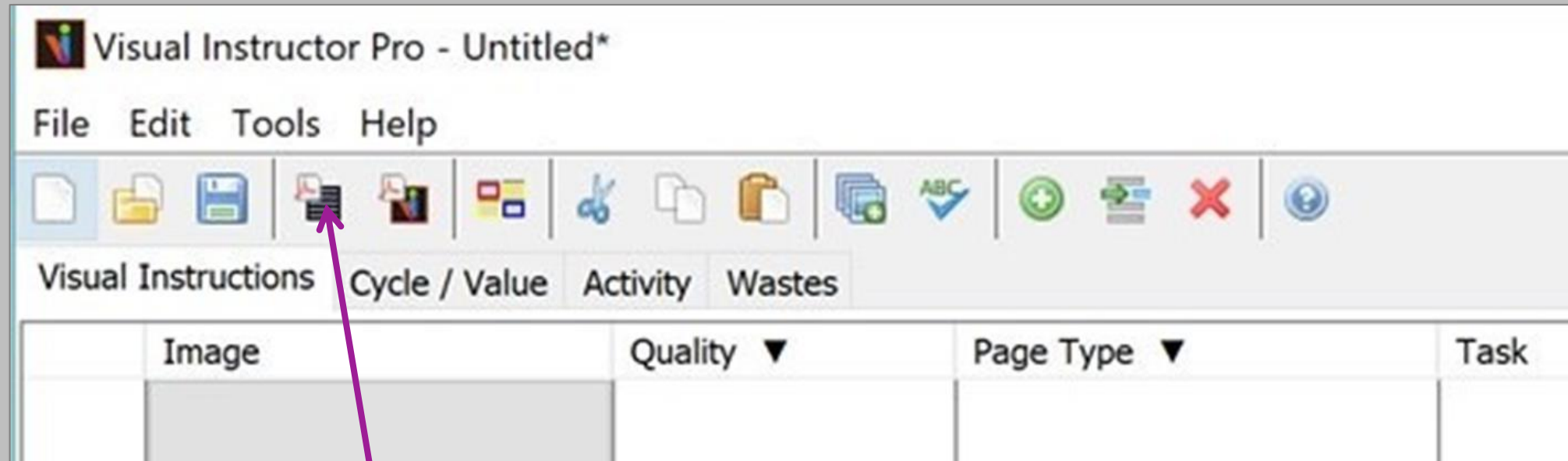
Inventory
(excess inventory not yet sold to a customer) or lacking inventory

Movement
(When operator moves unnecessarily)

Defects
(when product does not meet required specs)

Visual Documentation

Advanced Analyzer



Create SOE
(sequence of events)

Visual Documentation

Advanced Analyzer

Visual Work Instructions				Setup		Work		Wastes							
				Value Added	Non-Value Added	Machine	Labor	Machine	Labor	Overproduction	Overprocessing	Waiting	Transport	Inventory	Movement
Step	Pic	Cycle	Task Description												
1	X	5 min	Locate PROMAX 4000 C SERIES for TOE TAG MANUFACTURING		X	X	X							X	X
2	X	8 min	Retrieve RAW MATERIALS from RAW MATEIAL AREA		X	X	X			X	X		X		
3	X	1 min	Check RAW MATERIAL LABEL for PROPER RAW MATERIAL		X		X			X					X
4	X	8 min	Retrieve PIGMENTS from PIGMENT AREA		X	X	X			X	X		X		
5	X	1 min	Check LABEL for PROPER PIGMENT		X		X			X					X
6	X	3 min	Mix PIGMENT and RAW MATERIAL together	X				X	X	X		X			
7	X	0 min	RATIO is 40 pounds VIRGIN MATERIAL to 2000 GRAMS PIGMENT		X		X								X
8	X	2 min	Pour MATERIALS into HOPPER	X				X							
9	X	1 min	Pull KNIFE GATE open as shown		X		X			X			X		
10	X	2 min	TURN on MACHINE and FLIP SWITCH UP using HAND		X		X			X			X		

Cycle Time

Task

Value added

Activity

Wastes

Quality

Visual Documentation

Advanced Analyzer

Visual Work Instructions				Setup	Work	Wastes					Check & Verify						
				Value Added	Non-Value Added	Machine	Labor	Machine	Labor	Overproduction		Overprocessing	Waiting	Transport	Inventory	Movement	Defects
Plastics USA Work order 23545-001 Extruding Plastics Rev 3 Checking Batch																	
Process Improvement																	
Step	Pic	Cycle	Task Description														
1	X	5 min	Locate PROMAX 4000 C SERIES for TOE TAG MANUFACTURING	X	X	X							X				X
2	X	8 min	Retrieve RAW MATERIALS from RAW MATEIAL AREA	X	X	X				X	X		X				
3	X	1 min	Check RAW MATERIAL LABEL for PROPER RAW MATERIAL	X		X				X							X
4	X	8 min	Retrieve PIGMENTS from PIGMENT AREA	X	X	X				X	X		X				
5	X	1 min	Check LABEL for PROPER PIGMENT	X		X				X							X
6	X	3 min	Mix PIGMENT and RAW MATERIAL together	X			X	X	X	X		X					
7	X	0 min	RATIO is 40 pounds VIRGIN MATERIAL to 2000 GRAMS PIGMENT		X		X										X
8	X	2 min	Pour MATERIALS into HOPPER	X			X										
9	X	1 min	Pull KNIFE GATE open as shown		X		X			X			X				
10	X	2 min	TURN on MACHINE and FLIP SWITCH UP using HAND	X		X				X			X				

Start with last line and work to top to break the routine pattern of thought



Simply & Effectively Create Visual Work Instructions (VWI)

Thank you for your purchase!

CONTACT:

Dr. Steve Blackwell, Blackwell & Associates, LLC.

Brighton, Colorado, 80601

303.907.2700

info@visualinstructor.com