

W E L C O M E



PQ+[®] *Productivity by Video*

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Using Video for Production Optimization

- Improving manufacturing processes by simple observation still seems to be the standard idea
- Simple observation however is always subjective and less reliable
- Traditional time & motion studies based on this approach inherit the basic problems
- Only video based optimization replaces stopwatch, paper and pencil by a neutral, transparent and objective computer aided analysis

Operation: Affix, Nut | **New Operation** | **Edit** | **Delete** | **Save** | **Cancel**

Position

Start: 00 : 00 : 27 : 800 | Stop: 00 : 00 : 32 : 550 | Length: 4.75s

Analysis

- Activity
 - Take
 - Place
 - Handle
 - Affix
 - Adjust
 - Assemble
 - Inspect
 - Return
 - Instruction
 - Administrative
 - Wait
 - Work
 - Objects
 - Tools
 - Ergonomics & St

Current Operation

Affix Nut

Comments

Difficult to place, hidden position and bent wrist

Results for Fog Light Bracket

Loss/Unergonomic	20.85 s	55%
Supporting Activity	12.65 s	33%
Sum	33.5 s	88%
Productive Time	4.65 s	12%
Total	38.15 s	100%
Unknown Activity	0 s	0%

- Videobased technologies originated in Scandinavia and have become standard tools of leading companies like ABB, Ericsson and Scania
- Typical results include
 - Productivity +15% ... +45%
 - Setup Times -50% ... -70%
 - Cycle Times - 5% ... -30%
 - Area -25% ... -60%
- More quality and motivation
- Based on the Lean Principles Pull, Flow and Avoidance of Waste

Transparency and objectivity through video

Clear visualization of lean categories waste, support and value add

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Unknown Activity	0 s	0%

Quick and efficient analysis, based on defined activities

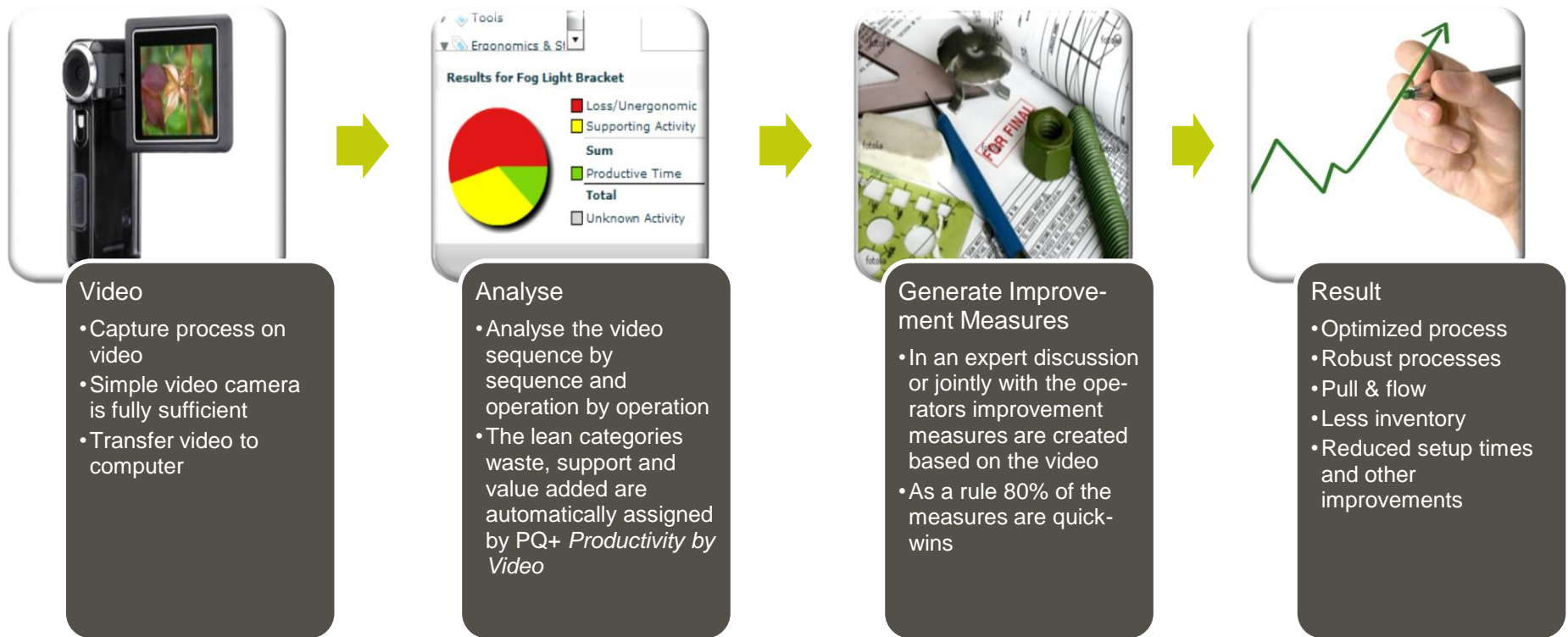
Ergonomic aspects additionally drive improvement

Optimized process by improved efficiency, effectiveness and ergonomics



Step by Step: Using Video for Production Optimization

+ In four simple steps video based productivity improvement leads to optimized processes





PQ+® *Productivity by Video* – The Basic Principle

- + PQ+® *Productivity by Video* is a web based application, which can run on any PC without prior installation in the internet browser. Only the Adobe Flash Player is required
- + During the upload the video will be automatically converted from basically all source formats, also those from cell phones, into PQ+' proprietary evaluation format
- + This dedicated flash format allows a frame-by-frame view of the video, backwards and forwards, within the web application – the basic requirement for any analytical evaluation

Project: PQ+ Web Demo Project

Industrial Metals

- Fog Light Bracket
 - Take, Steps, Fog Light Bracket
 - Take, Steps, Nut
 - Place, Fog Light Bracket
 - Affix, Nut
 - Affix, Nut
 - Take, Screwdriver, Steps, Stretch
 - Screwdriver, Assemble, Fog Light Bracket, Nut
 - Return, Screwdriver, Steps, Stretch

Operation: Affix, Nut

Position: [Slider]

Start: 00:00:27:800 Stop: 00:00:32:550 Length: 4.75s

Analysis

- Activity
 - Take
 - Place
 - Handle
 - Affix
 - Adjust
 - Assemble
 - Inspect
 - Return
 - Instruction
 - Administratic
 - Wait
 - Work
 - Objects
 - Tools
 - Ergonomics & SI

Current Operation

Affix Nut

Comments

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Results for Fog Light Bracket

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PQ+ Web Solutions



PQ+® *Productivity by Video* – Functionality

- + Complex MTM or method & time study approaches are reduced to a simple yet complete sequencing, which the user can do with a click of the mouse
- + PQ+® *Productivity by Video* visualizes immediately any non-ergonomic activity or other waste through the colour red
- + Support activities become yellow and only true value add will be shown in green
- + The client can subscribe to PQ+® *PbV* on a monthly basis or by pay-per-use
- + Cost for a monthly subscription are below 100 €
- + Online tutorials are available and the only requirement to use the software
- + Having the videos on a server simplifies remote analysis or team collaboration over various sites

Position

Start: 00:00:10:200 Stop: 00:00:13:200 Length: 3s

Analysis

- Activity
 - Take
 - Place
 - Handle
 - Affix
 - Adjust
 - Assess
 - Inspect
 - Retrieve
 - Install
 - Admin
 - Wait
 - Work
 - Object

Current Operation

Place

Comments

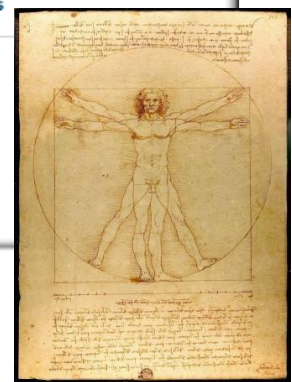
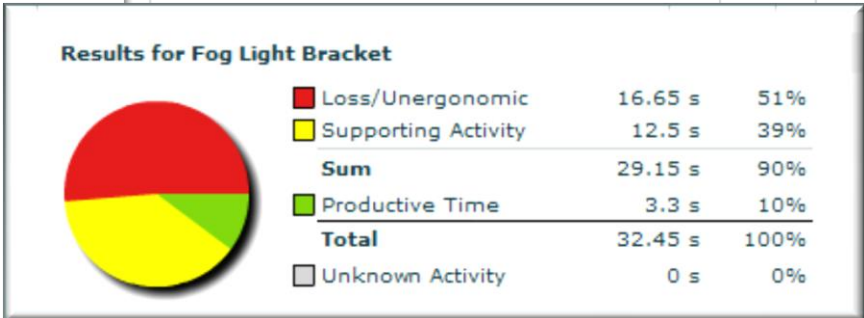
Analysis

- Activity
- Objects
- Tools
- Ergonomics & Steps
 - Steps
 - Stretch
 - Bend
 - Turn
 - Force

Current Operation

Place Stretch

Comments





+ Contact:

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