STABILIS MES

The best IT solution for optimalization of your production process

Executive Summary

In most production plants there exists:

- The need to improve production efficiency
- A significant improvement potential, including using e.g. Industry 4.0 tools

STABILIS is the best Industry 4.0 solution to improve efficiency. STABILIS allows constant efficiency improvement of machines while also reducing labour consumption and losses.

Improvement is a continuous process. Thanks to the unique STABILIS technology, it allows easy and quick changes in software, e.g. integration of new devices, applications, implementation of new functionalities.

The effectiveness of the STABILIS solution has been recognized by leading entrepreneurs.

Constant need to improve production efficiency

Problems regarding labour costs, energy efficiency and costs are increasing.

Problem	Trend
Increase in labour cost and difficulties in recruiting staff.	**On average, Polish industrial worker salaries have increased over the last year by +9%.** It's the largest growth recorded in the 21st century. *Polish Center for Economic Development*
Rising cost of energy and materials.	Within the next 10 years, the **focus on equipment productivity (OEE) will be crucial** for those responsible for business management. *Harvard Business Review*
Performance problem (OEE)	Energy prices have grown on average +30% per annum in the past 5 years (+40% in the last year). Leaders are almost 3x more **effective at combining large revenue growth with significant cost reduction.** *PwC*

STABILIS allows monitoring, event registration, as well as system and machine integration, which enables improvement in efficiency

STABILIS system features

- Registration of personnel and machinery working time
- Registration of information on quality and amount of waste
- Integration with other IT systems e.g. ERP (elimination of paper circulation)
- Remote monitoring of production in real time
- Detection and recording of downtime, minor stops and alarms
- Data analysis and generation of personalized reports

Benefits

- Improving production efficiency
- Reduction of labour
- Reducing the amount of losses

STABILIS connects production sites with IT systems

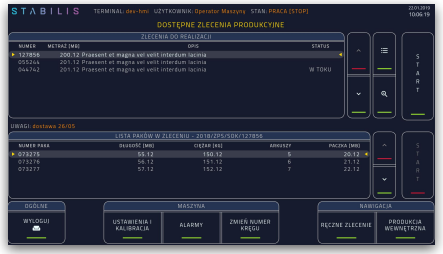
STABILIS transfers production orders from ERP to work and reports their status.

ERP (e.g. SAP, IFS)

Other IT systems and peripheral devices

STABILIS combines machines and peripheral devices (e.g. Collectors, printers, code readers) with IT systems: ERP, WMS, planning and scheduling etc.

Control panel

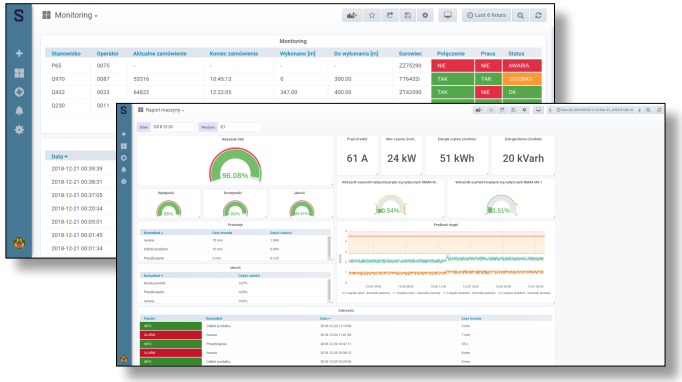


The STABILIS control panel (HMI) is intuitive and ideally suited to the needs of operator and production plant business model.

STABILIS®

Production unit/ Machine

Reports



Reports from the STABILIS system, including Lean indicators, are fully adapted to the current improvement priorities.

STABILIS interface is tailor-made and has unique functions

Provides access to historical data of each work station.

Connected to IT systems and peripheral devices.

Has the ability to **integrate with all authentication technologies.**

Enables **remote monitoring** and **real-time control** of operator panels.

Fully adapted to the production process and therefore **intuitive for the operator.**

Resistant to network and power outages (after resuming, restores latest panel view).

Each interface element is configured.

The advantage of STABILIS comes from the programming technology

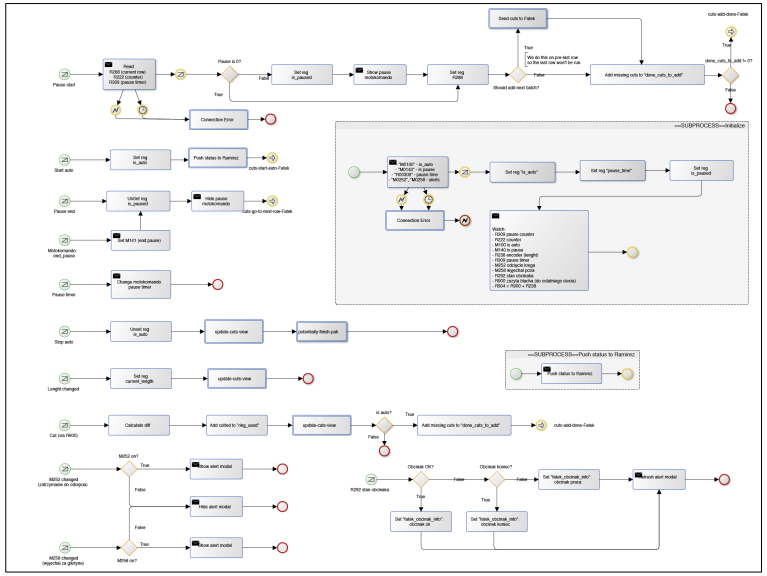
Traditional approach

```
  this.lines[3].buttons[index].label = (iscomma && isminus) ? '- .' : (this.min < 0) ? '-' : '.';
  this.lines[3].buttons[index].enabled = (iscomma && isminus);
  this.lines[3].buttons[index].changed = true;
}

this.async(function () {
  this.root.getElementById('motokomando-keypad-button-text-' + this.lines[3].buttons[index].id).textContent
});

let returnIndex = _.findIndex(this.lines[3].buttons, {'id': 'return'});
this.lines[3].buttons [returnIndex].enabled = ((this._showValue !== '0.' && this._showValue !== '-'
  && this._showValue !== '-0.' && this._showValue !== '-0' && times(_.toNumber(this._showValue), multiplier)
  && (this._showValue.indexOf('.') !== this._showValue.length - 1)) || this._showValue.length === 0);
this.lines[3].buttons [returnIndex].changed = true;

_.forEach(this.lines, (line) => {
  _.forEach(line.buttons, (button) => {
    if (button.action === 'put' && button.value !== '.' && button.value !== '-') {
      let postValue = _.toNumber(this._showValue + button.value);
      let enabled = (
        (
          isEnabled (this._showValue + button.value, this.min, this.max, this.precision, multiplier) &&
          _.toNumber(postValue) <= this.max &&
          _.toNumber(postValue) >= this.min &&
          this._showValue !== '0' &&
          (this._showValue.indexOf('.') === -1 || (this._showValue.length - this._showValue.indexOf('.') +
          !(button.value === '0' && (this._showValue === '0' || this._showValue === '-0' || ((times(this.pr
          !(button.value !== '0' && (times(this.precision, multiplier) % multiplier) === 0 && this._showValu
        ) ||
        (button.value === '0' && (times(this.precision, multiplier) % multiplier) !== 0 && this._showValue.
      );

      if (button.enabled !== enabled) {
        button.enabled = enabled;
        button.changed = true;
      }
    }
  });
});
```

Traditionally, software is created by writing code that is understandable and thus modifiable only by the people who created it .

As a result, changes are expensive, and over time the system becomes impossible to maintain and upgrade.

STABILIS approach



The functionalities of Stabilis are based on flow graphs.

They can be easily changed and combined, much like Lego blocks, in order to modify the existing system functions or create brand new ones.

Thanks to STABILIS programming technology optimization and continuous improvement become simple

Our innovative technology provides unique advantages:

- unique flexibility,
- ease of making changes,
- significantly faster software development,
- significantly reduced costs of changing requirements during the project,
- faster and easier analysis with the client,
- very complex problems covered.

We distinguish 3 classes of MES solutions and STABILIS

Type	Characteristics
Excel	Production planning and reports in the form of spread sheets.
Ready-made solution	A ready-made product, usually modular, but with limited configuration options.
„Tailor-made" solution	Personalised software, „tailor made" according to current needs.

STABILIS®

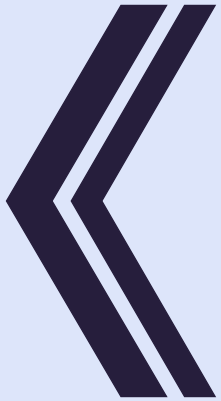
An ecosystem of solutions (Lego blocks – ready functional sets).

STABILIS is the only MES that fully adapts to individual needs and integrates all work cells at a relatively low cost and short implementation time**. Thanks to this it allows continuous improvement.**

STABILIS gives clients a higher operative efficient due to customisation and implementation speed

Benefits

- Improving the efficiency of personnel, machinery and reducing material consumption
- Benefits are achieved faster, on a larger scale and for a longer period



Unique qualities

- 100% adapted to each production
- Possibility of continuous adaptation to changing needs
- Facilitating and accelerating the implementation process

Reports analyzing barriers to the implementation of innovative technologies indicate that users decide about the success of the digital transformation.

STABILIS technology

Thanks to the easy and quick introduction of changes STABILIS programming technology allows the interface to be created together with end-users.

STABILIS approach

This approach makes users feel co-authors of the implementation, identify with the project, engage in its improvement and development, because they know the production lines best and know how to optimize production processes.

STABILIS has been verified by very demanding clients

„We have been looking for a MES software that would meet our expectations for years. STABILIS is the first one that has."

Head of IT at the Pruszyński Group

„User tests have shown that control via the STABILIS control panel is extreamly simple. That is why our employees can not wait for the full implementation of STABILIS."

Production manager at MDM NT

STABILIS implemtation case study

Client

The Pruszyński Group is one of the largest producers of tin roofing in Europe.
Their offer also includes e.g. construction and elevation products.

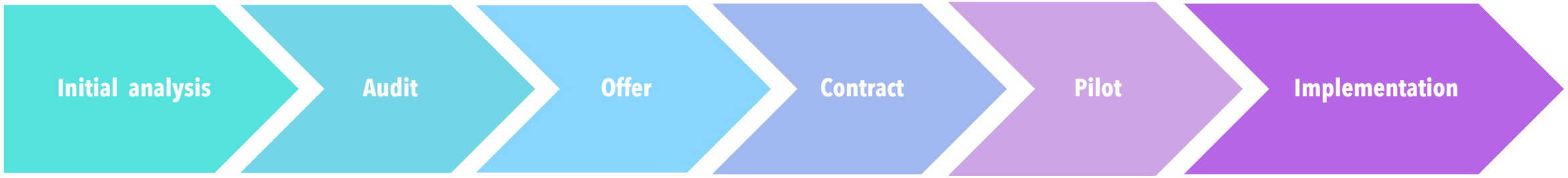
Challenges

- Integration of machines from a wide range of manufacturers using diverse control panels.
- Addition of new functionalities at production sites.
- Integration of peripheral devices from a variety of manufacturers (printers, scanners, RFID cards) with production stations and ERP.

First implementation results

- **Reduction of labour consumption, the risk of mistakes and interchangeability of staff between stations** due to the liquidation of paper work orders and manual entry of machine settings, registration of work results and data transfer between systems.
- **Improving efficiency** through the introduction of objective standards and related bases for reward of employees, controlling the performance of the entire factory with indication of bottlenecks and places of inefficiency.
- **Limiting losses, better identification of the causes of problems and more precise determination of raw materials stock status** by combining all information on performed operations (who, when, from what amount, what, what at what waste level, for whom)
- **Improving customer service level** by providing feedback on the progress and timing of orders and facilitating the individualization of production.

STABILIS implementation process allows the development and implementation of a perfectly adapted solution



Time		**~ 1 week**	**1 – 2 weeks**	**1 – 3 months**	**~ 10 machines / month**
Actions		• Audit of current IT systems • **Evaluation of the possibilities to improve efficiency (unique for STABILIS)**		• Integration of STABILIS with current IT systems • Configuration of functionalities and reports • **Iterative integration (unique for STABILIS)**	

Would you like to improve efficacy and productivity?
Contact us to arrange a meeting

Magdalena Materna

mm@stabilis.io

03-729 Warszawa, ul. Targowa 59/7

www.stabilis.io