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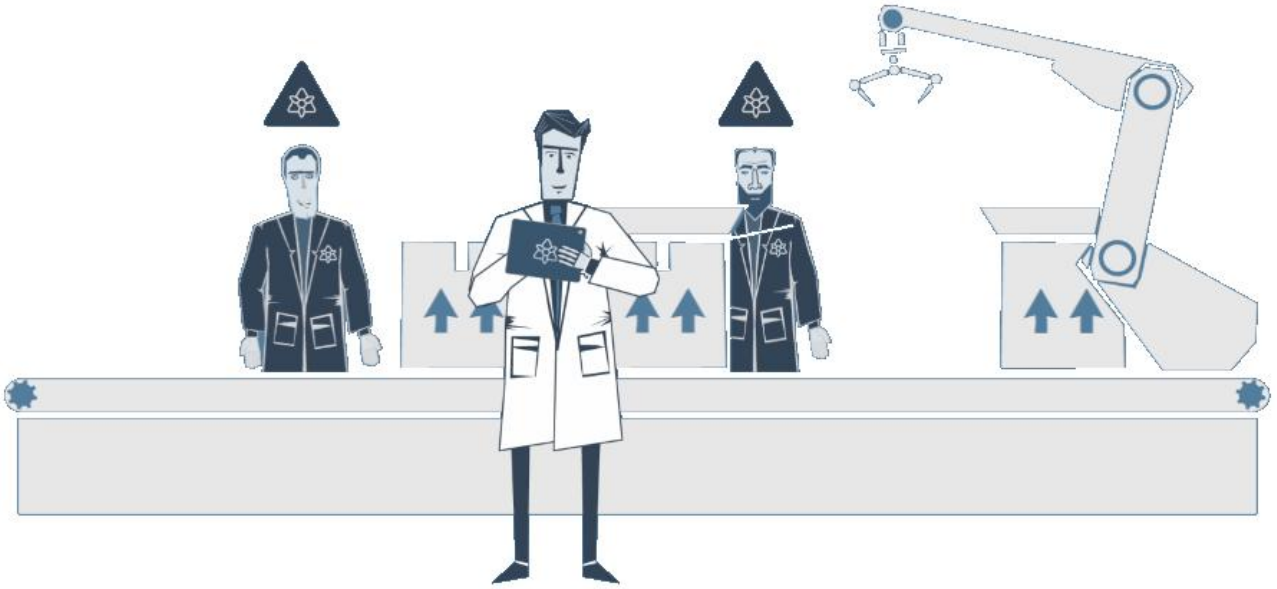
industrial Systems

Como implantar Lean en la Industria Alimentaria



¿Sus números?

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lean.org – Lean Enterprise Institute | Lean Production | Lean Manufacturing | LEI | Lean Services
www.lean.org Lector

Lean Manufacturing Implementation Facts and Figures

The following information is taken from the Manufacturing Advisory Service, they have been performing business improvement projects in many thousands of manufacturing companies across the Uk for the last several years. Most of these projects are based on the principles and tools of Lean manufacturing.
The following figures are average results for companies in many differing industries and of different sizes over a period of several years;

- DELIVERY +26%
- STOCK TURNS +33%
- PRODUCTIVITY +25%
- SCRAP -26%
- SPACE -33%

These are average figures from thousands of projects, not just a select few studies to make the figures look good. These figures are typical of what other academic and consultancy studies have published.
What would an increase in productivity of 25% mean to your company? How much time and money would be saved if scrap levels were reduced by 26%. How many angry customers would be happy and how many panic transports avoided if your delivery performance improved by 26%? How much cash would be freed up if you could reduce your inventory? What could you do with a third of your space free?

pero… ¿cómo es de fácil lograrlo?

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Lean implementation failu
Sebastián
www.thefabricator.com/article/shopmanagement/lean-implementation-failures

However, simply blaming the top people for these types of failures is not very useful. The following are the actual reasons for failure and their causes. The modes cited often are related, but each is identified separately because of its unique nature.

Poor Development of the Business Case for Lean. The key business case questions listed previously either are not asked or not answered satisfactorily. Unless there is a strong business case for lean, it's very hard for top management to develop the passion and determination necessary to implement it, and the initiative likely will founder.

A realistic impact on overall competitiveness and the value proposition must be derived first. Lean then must be translated into the language of business: time, money, and risk. Future-state modeling is vital. A strong, objective assessment of where the company is now, where it needs to be, and how lean will get it there is fundamental. Think in terms of return on investment (ROI).

Insufficient Understanding of Lean Six Sigma and Its Elements. It is very important that senior managers understand, in sufficient detail and from an overall [illegible] y nominally provide. This is critical to prevent exp [illegible] ment must have a sufficient knowledge base to provide strong, informed direction.

falta de entendimiento lean 6sigma

Further, it is difficult to build a proper deployment order and structure without understanding how the elements self-reinforce and contribute to the goals of the company. The choice of which lean elements to deploy and the order of deployment is critical and depends highly on the company.

Insufficient Top Management Focus and Involvemen [illegible] gated "project." But lean manufacturing is not a project. It is a fundamental c [illegible] anagement must be in front.

falta implicación ceo

Communications: Too Little, Too Complex, Too Simple. Different audiences need different descriptions of the benefits, risks, changes, and commitments required. [illegible] lain "what" and "why." Much of the fear, resentment, misunderstandings, ar [illegible] itiatives can be pre-empted by solid, consistent communication.

falta de comunicación

Poor Organizational and Leadership Development. Deployment and implementation can fail before it starts without a strong implementation team. Everyday support must come from important, respected line managers who have the most to gain or lose and have the power and authority to make things happen. This is a core top management task.

Lack of Proper Metrics to Determine Performance and Isolate Challenges. Lean requires metrics that focus on the processes of value creation and their associated costs. Traditional cost accounting techniques such as absorption, as well as individual machine and employee performance, can cause a lot of nonlean behavior.

Lean accounting ties directly to financial measures but focuses on performance of the entire value delivery system

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Lack of Middle-Management Buy-in. It's not just buy-in that can be lacking. It's also pushback. Middle managers and professionals of eve They have a lot of collective responsibility, but n

falta de management intermedio

Traditional lean dogma puts a further squeeze (real or perceived) on this critical source of skills and talent. It really doesn't answer the key question: What's in it for me?

Traditional answers typically are: "You'll have a job (maybe)" or "We'll fire you and get somebody else." The real answer, though, is the company will be more competitive, and your job will be much more satisfying.

For small and midsized manufacturers to implement lean, this issue must be resolved realistically. The key middle-management and professional team must be onboard, or lean will fail.

A lot of resistance disappears when middle management is highly involved in the design and deployment of lean. Fear is removed through communication, training, involvement, and support.

If changes need to be made, senior management should make them, but only after exhaustive efforts are made to retain the company's known and proven skill base.

Management or Employee Capabilities Are Lacking. These are generally technical, people-skill, or leadership capabilities. Key elements of lean rely heavily on ployment of CI requires competence in technical areas (includin an initiative without having the required skills is not realistic. A good assessment can identify the skill gaps and prescribe the solutions needed to bolster the capabilities.

falta de habilidad empleado

Not everyone is a leader. Lean requires top-to-bottom leadership of a special kind. Lean leaders are firm and inspiring, relentless and resilient, dema ed and flexible. Above all, they have to be smart and highly respected in the organization. y has at least one of these leaders. These people must be a passionate part of the lean leadership team.

no hay lider

Deployment Methods

Lean also can fail because of faulty deployment methods.

Weak Deployment Strategy. Companies must determine ahead of time what core elements are to be deployed and the order of deployment. They also must determine where to start and how lean will expand throughout the operation. This is critical. Companies can fail by attempting too much. They also can fail by attempting too little and assigning the initiative to a "backburner" status.

A proper strategy must assign clear responsibilities and show what resources are to be committed. Metrics and timelines must be defined. Finally, the strategy should anticipate problem and recovery scenarios.

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Lean implementation failu
Sebastián
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Insufficient or Inappropriate Training. Lean training is crucial, obviously. But the content, level, and depth vary by the company and its needs, a ess case. Training should be appropriate for the lean elements to be deplo

falta de entrenamiento

For example, in-depth training in one-piece flow and kanbans for a fabricator or processing-oriented company usually is not as critical as it is for an assembler or integrator. In-depth training in operational equipment effectiveness (OEE), CI, and hybrid pull production may be far more important, at least initially.

Failure to Learn Proper CI Methodology—Reliance on Kaizen Blitzes. Blitzes can be powerful. They are short-term, intense, and can provide quick improvement results. They also can require a significant amount of on-demand resources. The kaizen blitz is an important part of the CI toolkit. But realizing successful and sustainable change through blitzes without first having a tested and consistent CI methodology base is more luck than system. It's like trying to hit a major league slider without first playing in the minor leagues. A strong, steady CI culture is critical to a successful lean journey.

Reliance on a Single In-house Champion or Expert. Expertise obviously is necessary. So is critical mass. There must be a sufficient amount of knowledge among a suffic d spread. Further, the expertise must reside with line people as well a is through a combination of formal (classroom) training and on-t aff expert who has no line authority to implement lean simply is not realistic.

demasiado lider / sensei

Looking at the list of deployment methods, it's interesting to note that most of the failure modes occur before the deployment. Lean can be set up to fail!

Lean implementation is not simple or easy. However, results show that, when done properly, lean lives up to its promises. Lean and its elements work. All of the failure modes presented here can be avoided or overcome.

The most important parts of lean implementation are preparation—especially an objective assessment and development of the business and technical cases for lean—leadership that can get things done, appropriate training, resolution of people issues, and well-designed deployment methods.

Every company that implements lean will have its own story to tell and will have overcome roadblocks unique to it. The ones cited here are common, and they can be deadly. Awareness and avoidance of these modes will make the implementation a lot smoother and faster.

*Richard G. Kallage is a principal of KDC & Associates Ltd., 522 S. Northwest Highway, Suite UL-8, Barrington, IL 60010, 847-776-7407, fax 847-620-2203, **rkallage@kdcconsultants.com**, **www.kdcconsultants.com**.*

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A Lean Journey: Top 10 Re
Sebastián
www.aleanjourney.com/2013/05/top-10-reason-why-lean-transformation.html

In my experience these are ten reasons why Lean implementation fails:

1. No Strategy

no estrategia

Companies must determine ahead of time what the vision and direction will be. A proper strategy must assign clear responsibilities and show what resources are to be committed. Metrics and timelines must be defined. Management must decide what core elements are to be deployed and the order of deployment. They also must determine where to start and how Lean will expand throughout the operation. Finally, the strategy should anticipate problem and recovery scenarios. This is critical. Companies can fail by attempting too much. They also can fail by attempting too little and assigning the initiative to a "backburner" status.

2. No Leadership Involvement

Lean requires top-to-bottom leadership of a special kind. Lean leaders are firm and inspiring, relentless and resilient, demanding and forgiving, focused and flexible. Above all, they have to be smart and highly respected in the organization. Every successful company has at least one of these leaders. These people must be a passionate part of the Lean leadership team.

3. Relying on Lean Sensei/Champion

Expertise obviously is necessary. So is critical mass. There must be a sufficient amount of knowledge among a sufficient number of people for lean to work initially and spread. Further, the expertise must reside with line people as well as staff. Everyday support must come from important, respected line managers who have the most to gain or lose and have the power and authority to make things happen. Reliance on an outnumbered staff expert who has no line authority to implement lean simply is not realistic. Deployment and implementation can fail before it starts without a strong implementation team

4. Copying Others

no copiar

Some enterprises think they will get desirable effects by applying Lean tools that others have gotten great achievements. Successful implementation of any Lean tool must be closely related to the management philosophy So we can't succeed by imitating and copying practices of others indiscriminately, it must be combined with local culture.

5. Thinking Lean Is A Tool

Lean implementation can not be treated as a delegated "project." Lean manufacturing is not a project. It is a fundamental change in the value delivery system. Top management must be in front of this.

6. Lack of Customer Focus

Many companies do Lean for internal cost reasons rather than external and customer-focused reasons. The focus of Lean is on providing the customer with more value sooner. Without customer focus, Lean management techniques are difficult to employ.

7. Not Engaging Employees

Employee partici
falta implicación empleado
main principle aff
work satisfaction. Workers typically have more complete knowledge of their work than does management; hence, if workers participate in decision making, decisions will be made with better pools of information.

8. Not Educating Employees

Lean t
falta formación empleado
and de
and function. It goes back to the business case. Training needs to be appropriate for the Lean elements to be deployed.

9. Lack of Understanding

Most manag
falta de entendimiento
we don't und
to support it. This lack of understanding of Lean by management allows even the most subtle of things to derail Lean efforts.

10. Conflicting Metrics

Lean re
conflicto de métricas??
value cr
cost accounting techniques such as absorption, as well as individual machine and employee performance, can cause a lot of non-Lean behavior. Lean accounting ties directly to financial measures but focuses on performance of the entire value delivery system.

Lean implementation is not simple or easy. However, results show that, when done properly, Lean lives up to its promises. Lean and its elements work. All of the failure modes presented here can be avoided or overcome.

Lean to succeed in your organization, management
ome a student of Lean in order to be a successful sponsor. In other words, you have to apply Lean to your management process first in order to understand how to apply it to others.

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Why lean efforts fail: Views
Sebastián
www.reliableplant.com/Read/22985/lean-efforts-fail-plant

Over the years, I have observed some of the reasons for this lean fanfare-and-fade phenomenon. You can probably add your own thoughts to this list, but here is my best shot:

- Not used as an overall business philosophy
- People vs. process dependent
- Use of "tools" only
- All functions aren't committed or involved
- Conflicting metrics
- Good for the plant, but not for senior leaders (it has to start at the top)
- Forgetting the front and back end of the business (suppliers, customer demand and inventory strategy)
- Home run mentality

no se usa como filosofía

querer atajar

However, when you really dig into it, the basic reason why the implementation of lean fails at most companies boils down to culture. Not Japanese vs. American, but the corporate culture and how the company is led from the top. What most leaders fail to realize is that lean is a management philosophy, not simply a collection of tools for material and information flow or problem solving. And, most corporate leaders either do not understand its value or do not have the patience and control to implement it. Slow, steady continuous improvement does not lead to immediate recognition, quick promotions or soaring share prices. Successful implementation requires something that is very rare in both people and organizations: constancy of purpose. However, if you stick with it, it is amazing how the little day-to-day improvements add up over time; after a few months, you look back and realize how much has been accomplished.

RELIABLEPLANT 2015
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Related Articles

- Toyota's extended lean enterprise
- Streamline Your Maintenance Operation for Optimum Performance
- 10 Keys for an Effective Lean Operation
- Standing Up for Lean Principles

Seguramente por eso…
Existe la creencia de que

“el Lean no es para todos”

(algunos sectores se ha quedado fuera de él por completo)

¿Y soluciones?

En mi opinión, nos hemos centrado muchos años en el síntoma y no el origen real del problema …

3 problemas complejos que aparecen en cualquier implantación de control industrial

1 2 3

el personal de planta es experto en tareas industriales, **no en formularios**

1

el personal de planta **nunca encontró utilidad**
a los registros que les pedimos que hagan

2

demasiado **papel** en la planta

demasiado tiempo sin herramientas adecuadas para este trabajo

3

pero… ¿y se la damos la vuelta a la manera en la que se implantan los sistemas de control en planta?

Diseñamos asistentes que ayuden al operario en sus tareas cotidianas y que consigan los datos de control que necesitamos casi…

sin que ellos se den ni cuenta.

En ese caso, ellos serían los más interesados en que eso funcionara, ¿no?

2.2
A3/E15 (Bobigny/Bondy)
A3
D20
Boulevard Edouard Branly
Arrivée
12:49
88
Vitesse
69
90
GARMIN nüvi

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alerta llegada materia prima
zona: muelle 5 recepción materiales
enviada por: Antonio Cáceres
alerta de nivel 3 - moderada
atención requerida en max.: 10 min.
validar
reenviar
muelle 5
recepción materiales

12/14
16 : 07
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00:03:160

usuario activo

zona activa

entradas
de material

salidas
de material

auto
print

reubicaciones

pend
jobs

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Industrial Systems

introduzca su código de usuario
7
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validar
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ilEAN
industrial Systems

entrada de materiales por
compra

entrada de materiales resultantes de
producción

registrar una entrada
manual

material descargado

albaranes de proveedor en descarga

324254#SERIE 1
EL DUO HARINERO,S.A.

E4234#CV
CARO IMPORT, S.A.

n789#SERIE 1
CPNFITURAS LINARES, S.L.

insertar nuevo producto en el albarán activo

productos a recibir en albarán nº 324254#SERIE 1

PL 50 RE 0
HARINA "EL MOLINO" 1 KG.
peso

PL 20 RE 0
HARINA DE MAIZ COMUNIDAD "MAIZENA" 2,5 KG.
peso

PL 10 RE 0
HARINA REPOSTERIA 1 KG.
peso

PL 50 RE 0
HARINA TRIGO TEJEDOR 5 KG
peso

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arriba

abajo

eliminar

menú especial

etiquetas

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R22443 - # EL DUO HARINERO,S.A. **HARINA DE MAIZ COMUNIDAD "MAIZENA"**	45	0,00
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R22441 - 432432 # EL DUO HARINERO,S.A. **HARINA "EL MOLINO" 1 KG.**	45	0,00

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arriba | abajo | eliminar | menú especial

etiquetas | salir

albaranes de proveedor en descarga

324254#SERIE 1	E4234#CV	n789#SERIE 1
EL DUO HARINERO,S.A.	CARO IMPORT, S.A.	CPNFITURAS LINARES, S.L.

compras de materia prima — 01/07/2014

producto: HARINA DE MAIZ COMUNIDAD "MAIZ

albarán nº: 324254#SERIE 1

PL 10 RE 0
HARINA REPOSTERIA 1 KG.
peso

control calidad | 0 temperatura | nº de lote | nº precinto / certificado

proveedor: EL DUO HARINERO,S.A.

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45	0	

fecha entrada	fecha producción
01/07/2014	01/07/2014

nº de copias para cada entrada	fecha fin uso
etiquetas 1	31/07/2014

cancelar registro | adjuntar documentos a la mercacía | registrar entrada

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seleccione la posición en la que se ubica el material

HARINA "EL MOLINO" 1 KG.

almacén CNG

fila Fila

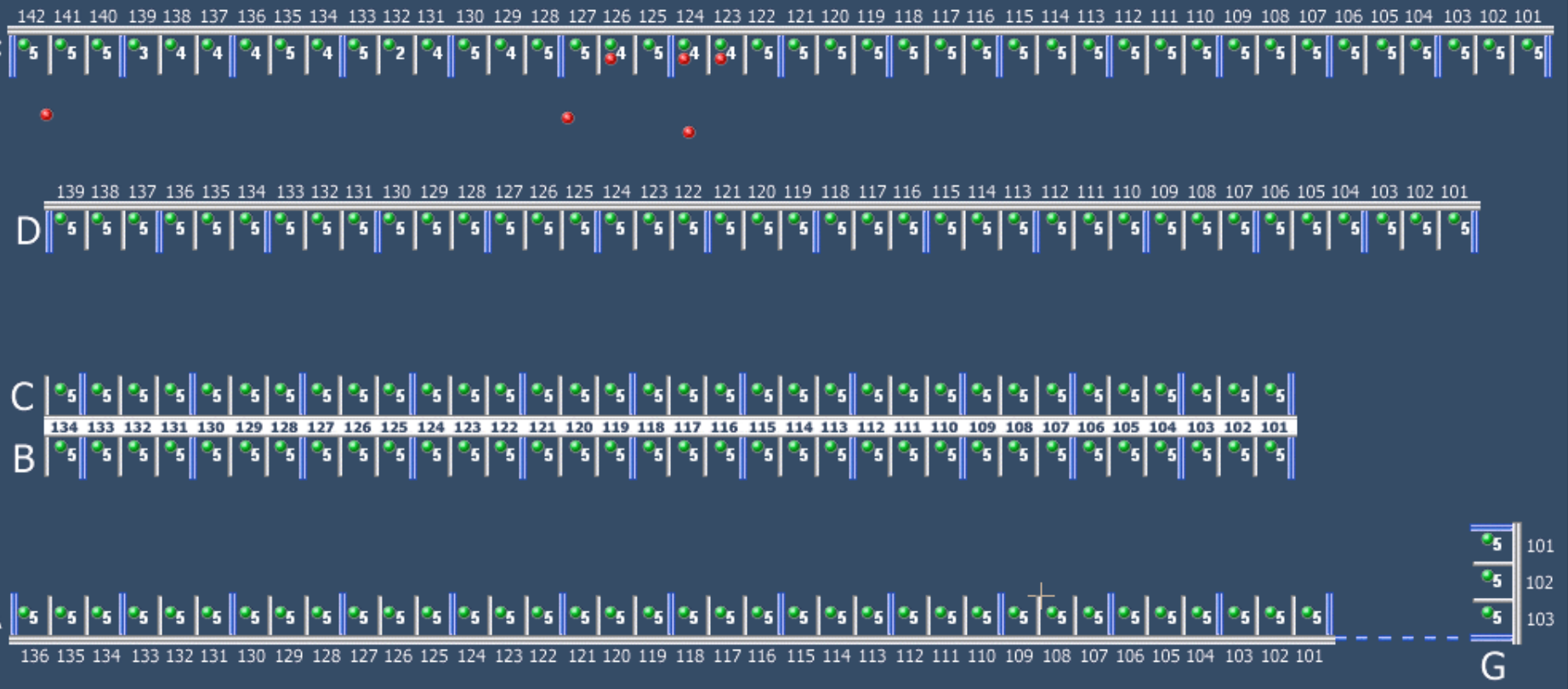
columna Col

Ubicación Multiple

validar

cancelar

Almacén A10



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R22439 --- 05/10/2013-19:08:00 --- 10 ud. de TARTA DE LA CASA (2013/40/152)
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R22438 --- 05/10/2013-19:06:00 --- 20 ud. de LECHE CONDENSADA 3/4 (700G) (75676567 #
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R22437 --- 05/10/2013-19:06:00 --- 10 ud. de LECHE CONDENSADA 3/4 (700G) (312312 #
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nº copias 1
R22427 --- 05/10/2012-21:44:00 --- 5 ud. de GELATINA NARANJA 12 (2012/40/146)
nº copias 1
R22426 --- 05/10/2012-21:37:00 --- 25 ud. de CANELONES (2012/40/140)
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R22425 --- 05/10/2012-20:09:00 --- 2 ud. de HARINA "EL MOLINO" 1 KG. (5454 # EL DUO
nº copias 1
escape
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etiquetas seleccionadas

material descargado

R22443 - # EL DUO HARINERO,S.A.		
HARINA DE MAIZ COMUNIDAD "MAIZENA"	45	0,00
R22442 - 432432 # EL DUO HARINERO,S.A.		
HARINA "EL MOLINO" 1 KG.	89	0,00
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HARINA "EL MOLINO" 1 KG.	45	0,00

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- PL 50 RE 0 — HARINA TRIGO TEJEDOR 5 KG — peso

TIEMPO

de registro

de operación

PERSONAL

MATERIALES

Tiempo de registro

7 TAREAS

~~40 MINUTOS~~

18 SEGUNDOS

- Autorizar al proveedor
- Valida productos y cantidades
- Asegura que el proveedor cumple con las calidades exigidas
- Posiciona la materia prima en el almacén
- Imprime las etiquetas de identificación
- Procedimientos de calidad ISO
- Inserción automática del albarán y nota de entrega en el ERP

Esta nueva manera de trabajar en planta…

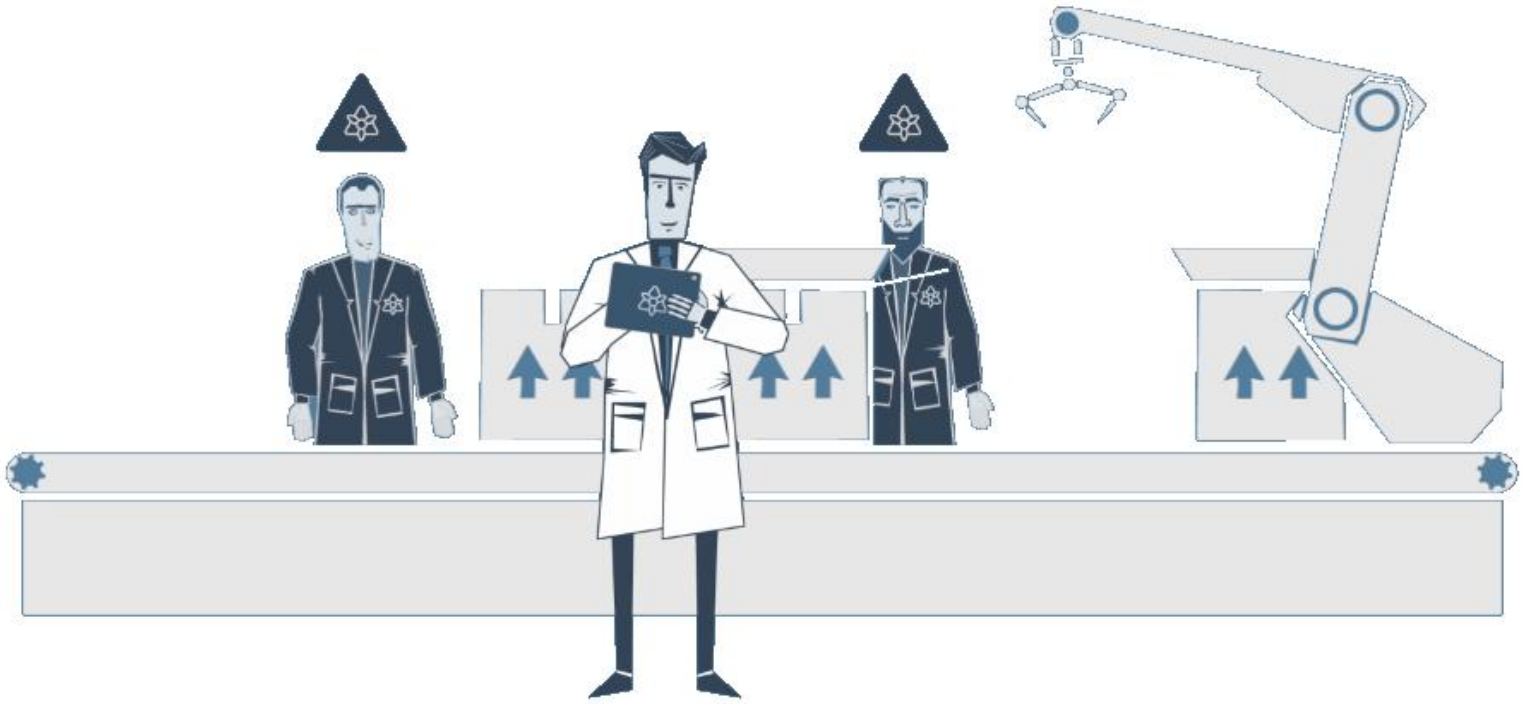
¿qué ventajas te da?

3

1

un **sistema nervioso digital** para la planta

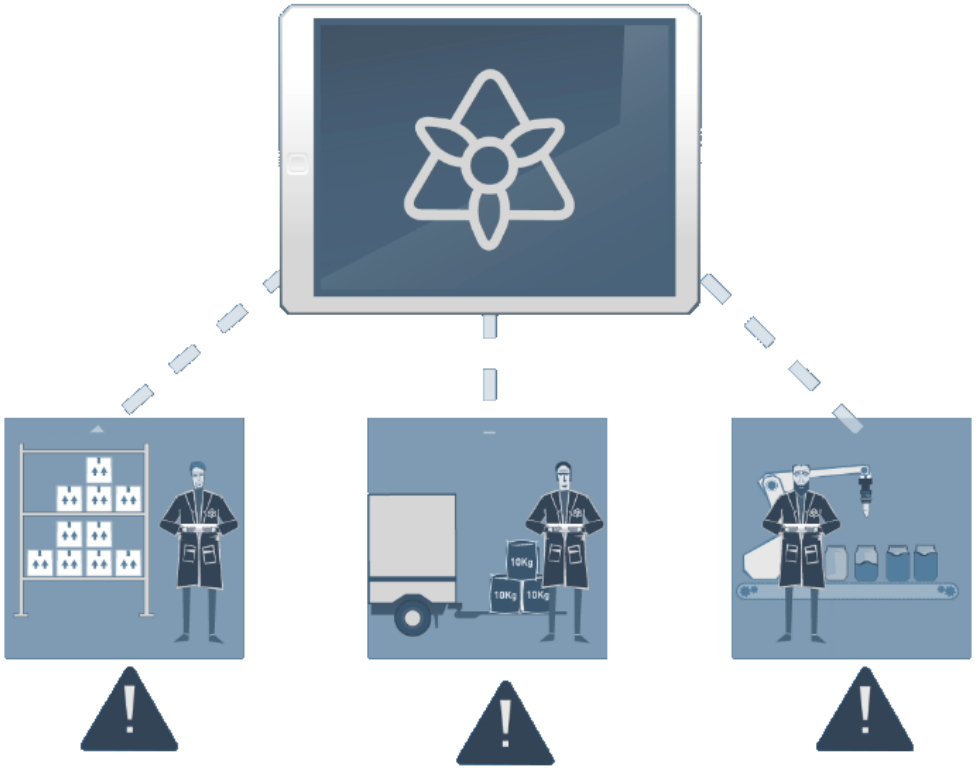
registra toda la actividad de la fábrica y te alerta de cualquier problema en tiempo real



2

asistentes de trabajo LEAN en **pantalla táctil**

ayuda al operario a reaccionar siempre de la misma manera y siempre eficientemente



3

colector de datos de planta que alimenta **automáticamente** a tu **ERP**

SAP
Oracle
JdEduards
Navision
Baan
Ross
SAGE
...

Pero lo más importante de todo esto es que ...

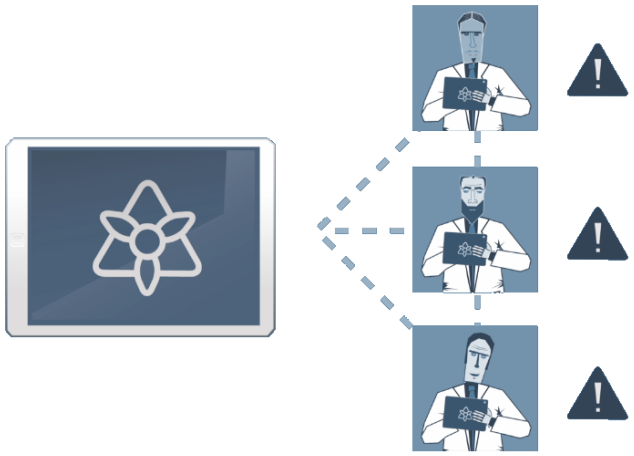
Estas 3 características unidas

disparan tus posibilidades reales

de implantar LEAN MANUFACTURING

y conseguir esos % de mejora tb para tu planta

(pone el Lean al alcance de "todo el mundo")



veamos un ejemplo de este revolucionario concepto en control industrial

s.brau@ilean.ws