Better Data

Generating more reliable information with OnRamp

Introduction

When you are investing in your firm or planning your next big move, choosing how to best spend your time and money can be stressful. The only way to make this decision less stressful is to work on ignorance or increase knowledge.

Working on ignorance is doing nothing more than trusting to luck and anecdotal evidence that what you are about to do is the best bet. How often can you assume that sales people working on commission are being honest, that your favourite tool brand won't be a lemon this time, or hoping that the golf links hearsay about upcoming business possibilities is accurate?

No. The best option is to do your research and increase your knowledge. Find the best product based on mountains of data, condensed down to what is most important to you.

A Glut of Bad Data

Of course, you take the sensible route and to your research. You wouldn't be where you are now without it. But how can you trust that the data you based your decision on is correct?

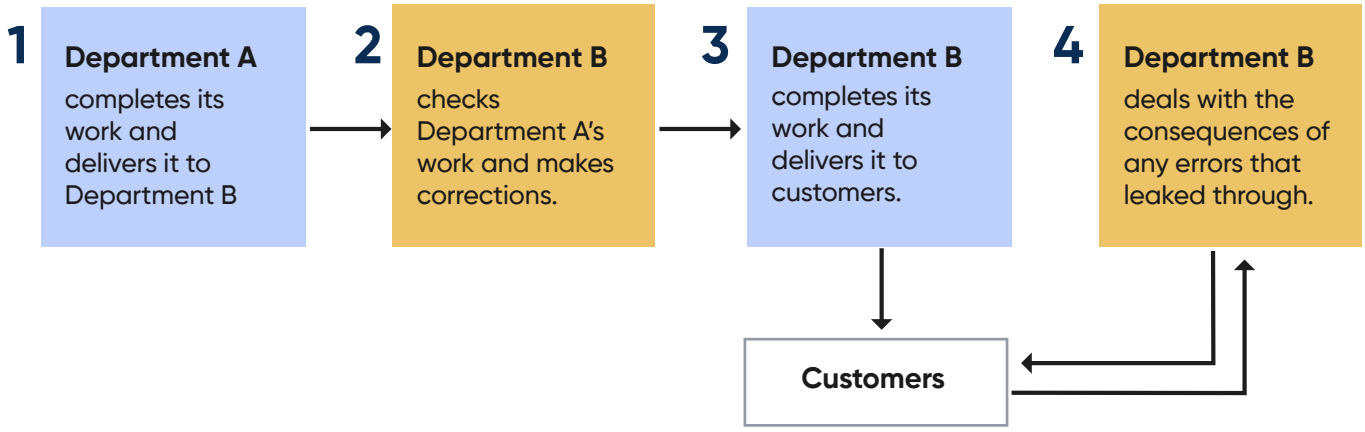
Recent studies by Gartner found that poor data quality has companies losing up to $10 million a year, with IBM calculating that in the US alone, the lost revenue due to data errors total over $3.1 trillion. Three trillion dollars is a difficult figure to ignore.

Now, you may be wondering how they come up with that figure? Where are these losses being seen? Well, these costs come in many forms:

- **Added work correcting bad data**
- **Shipments delivered to the wrong address**
- **Shipments containing the incorrect cargo**
- **Reports with incorrect information leading to poor conclusions**
- **Customer returns charged to you**
- **Lost inventory**
- **Machine breakdowns**
- **Poor worker usage**
- **Etc.**

The Hidden Data Factory

Visualizing the extra steps required to correct costly and time-consuming data errors.



The list of losses caused by bad data is almost endless, since an error in one record can impact your entire production chain. As a matter of fact, research from the Harvard Business Review points to the fact that only 3% of company data meet basic quality standards. Data scientists have a name for this ongoing production of errors: the hidden data factory.

This is an entire production line within your production line that is responsible for making nothing but non-value-added work. These expense-making machines are constantly stealing from your bottom line.

You may still be wondering how these figures could be possible. Or maybe you are thinking that this isn't happening at your place of business. Well, consider the following figures:

- 4 hours/ day – the amount of time your average knowledge worker wastes searching for information, correcting errors, or confirming data with reliable sources in cases where the data seems gray.
- 5 hours/action – the amount of time spent cleaning and organizing data to import or transfer between applications that do not interface.
- 8-12 hours/action – the estimated amount of time lost due to hidden data factories in simple operations, as found by using the "Friday Afternoon Measurement*" and the "rule-of ten**."

* Friday Afternoon Measurement - managers assemble 10-15 critical data attributes for the last 100 units of work completed by their departments — essentially 100 data records. Managers and their teams work through each record, marking obvious errors. They then count up the total of error-free records. This number, which can range from 0 to 100, represents the percent of data created correctly — their Data Quality (DQ) Score. This is the method that was used to calculate the 3% basic quality standards.

** Rule-of-Ten – each quality assurance level costs 10 times more in terms of time and money to correct and fix a defect over the prior stage, where each stage should have 10% of the remaining defects left in the product.

Added to the cost in lost time, is the eroding sense of trust in your data. Concerns about accuracy and second guessing the listed figures will take you down a hole that inevitably leads to poorer decision-making.

Examples of DOWNTIME Waste in your Data

- **Defects** - data entered with errors, like typos or data entered in the wrong field.
- **Overproduction** - entering data in duplicate, like entering customer data into the CRM and shipping systems.
- **Waiting** - waiting for data to be processed, or delivered.
- **Non-Utilized Talent** - staff not trained to enter data into a certain system or in a certain way.
- **Transportation** - transferring data from one physical location to another.
- **Inventory** - the data you keep. Having an excess of inactive or inaccurate records.
- **Motion** - moving data between systems, like entering data into multiple systems.
- **Extra-processing** - doing more than what is required. Like unnecessary reports.

A Leaner Way Forward

All of this does paint a bad picture with a lot of fat needing to be cut. After all, based on the figures above, you must find a way to cut the waste being generated by the hidden data factories. The bad news is that it's never as easy as just telling your staff to stop making so many mistakes. After all, it's not always clear where the errors are originating or, after finding the root cause, removing the cause can be costly or difficult.

The good news is that you know how to resolve the issue.

By applying a lean methodology to data entry and processing, you can start to: identify the problem, map the process, create flow, establish pull, seek perfection.

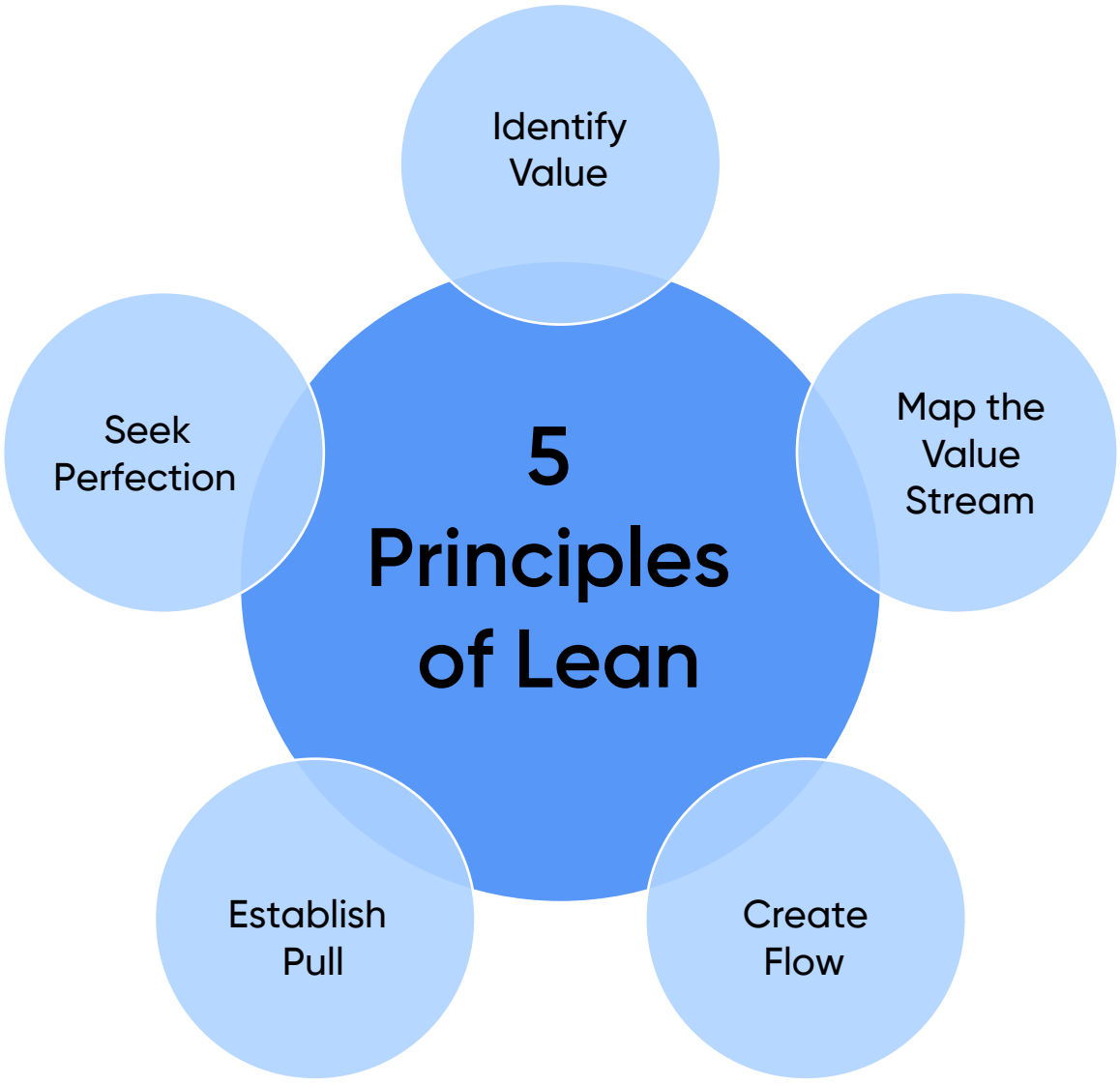


Figure 1: The 5 Principles of Lean

I - Identify the problem

For the most part bad data, in the computer age, usually comes from one place: communication error. Now, communication errors can be broken down into the following 3 problem areas:

- **Receipt error.** For example, when receiving information from the customer, the email or the phone call was unclear, so you couldn't understand what the customer wanted and didn't follow-up correctly.
- **Input error.** For example, a typo or entering a value in the wrong field.
- **Transfer error.** For example, two applications that don't communicate well with one another generate issues or errors.

It is now merely a question of figuring out which one is affecting which portion of your business.

II - Map the process

Once you discern where the problem areas are, like a sloppy typist, or a legacy system that can't communicate with the new CRM system you acquired, you now have to map what is being affected by those errors and how to resolve them.

The first two areas can be resolved by having a manager confirm the data as entered, or you can bypass the possibility of human errors by looking to implement direct electronic communication, or EDI, between you and your customers, vendors, and banks.

The third problem area often requires 3rd party plug-ins, or other services to ensure the applications can communicate with one another.

A better solution to all three areas is to implement a single point system, where all the data is contained within one program and one database that quickly and efficiently allows communication between all your business units and supports EDI.

III - Create flow

Having implemented procedures for more management checks on data, or overhauling your IT systems to implement a single point system, you now have to ensure your staff are staying to the new flow.

This will generate less waste, just by the simple act of having better data available with less errors created.

IV - Establish pull

With errors decreasing, you will see your costs go down, meaning you can pass some of those savings onto your customers while also allowing them to create requests that are automatically viewed by your planning team, and so shortening the amount of time you require to get your goods to the customer.

V - Seek perfection

With the problems solved, your waste cut, and your flow and pull running well, you can run the process again on the same data set or a new one to keep improving your processes and removing waste.

Lean Data is Good Data

The above process has been found to help you close shop on those hidden data factories, leading to more productivity, and most importantly, more informed decisions.

As you know, there are multiple data points for you and your team to work through. For example: Customers, Vendors, Employees, Parts, Work Centers, and Maintenance.

For most firms, it is impossible to clean all this up in one go. Instead, focus on your small data initiatives by trying to implement the following practices by using the lean methodology:

1. Eliminate hidden data factories – look for the waste areas and cut them
2. Reduce transport and movement wastes – cut out data movement and transport wherever possible
3. Simplify handoffs – simplify requests between departments

You should also try to get everyone involved, including yourself, in ensuring that only good data is logged.

The next steps are:

1. Define your subject matter experts, or SMEs.
2. Open communication channels between the SMEs so they can ensure that each step in the process can communicate it's needs to the previous and next.
3. And have them provide training to their teams on the best ways to input data and ensure it is valid.

Conclusion

Allowing your bad data to keep on creating non-value-add expenses in the form of hidden data factories decreases your competitiveness and decision making. While there is money and business lost because of bad data in every modern industry, that can be mitigated with better systems, more automation, and smarter people management.

Staying ahead of your bad data ensures your firm is nimble and ready to capture more market share and make you a leader in your field.

Where OnRamp Helps You

OnRamp is a single point database ERP system that was designed from the ground up to touch all your business units and improve their processes and communication with each other.

This means no added IT systems, no other vendors, no messy 3rd party plug-ins, and no added costs. All your data instantly shared with all your business units. And to help you get started quickly and with your best foot forward, OnRamp's consulting team has decades of combined experience in manufacturing and implementing proven management methodologies that will improve your bottom line. Whatever you make, we can help you make it better.

We know manufacturing.

And we want to work with you to

make it better.

OnRamp's ERP software can help to:

ONRAMP SOLUTIONS

Here are some of the things that OnRamp can help you improve:

PRODUCTION FLOOR:

Warehouse management system	Storage system management	Production planning
Order policy suggestions	EOQ calculations	Inventory management
Shipment management	Work order management	5S audits
MRP	Finite scheduling	Maintenance management, including preventative maintenance management
Worker skill management	Plant issue/ suggestion tools	Detailed capacity planning
Gateway queues	Work center scheduling	Online inspection software
Task automation	Quality management system	Scrap management
Quality alerts	Shop monitors with production entry capacity	Engineering document and drawing management

FRONT OFFICE:

A single database for all records	EDI communication ready	Paperless approval and sign-off
Customer request management	Easy to access files and data	Team communication tools
Paperless accounting	Lead time & inventory management	Vendor relations portal and management
Customer relation management	Project management and approval	Training and skills gap analysis
Notification systems	Server run software with a locally installed shell	Customizable reports and documents

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