

# How kanban saved a Salvation Army hospital in Indonesia Twice!

Marcus Hammarberg  
@marcusoftnet



**LeanKanban**  
North America 2016





# Cash flow

Cash flow

Salaries

Cash flow

Operational permit

Salaries























HOW KANBAN SAVED A  
SALVATION ARMY HOSPITAL  
IN INDONESIA

TWICE!

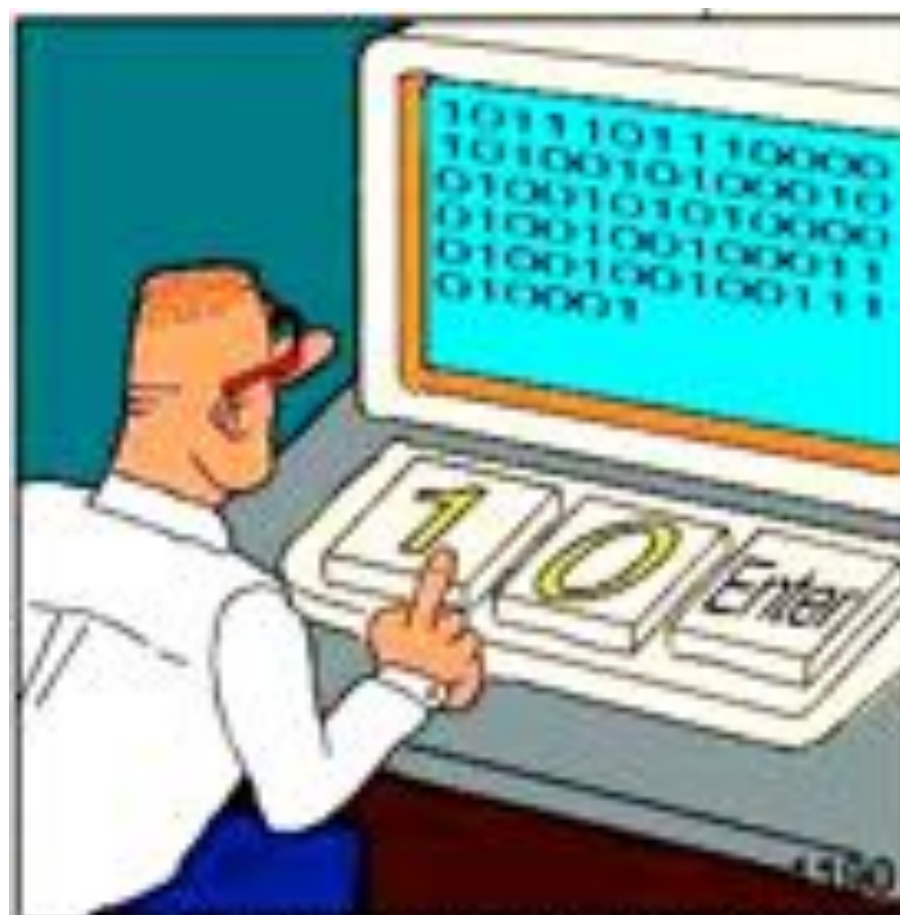


ap-  
titul  
titled









**REAL** Programmers code in **BINARY**.



**Microsoft**

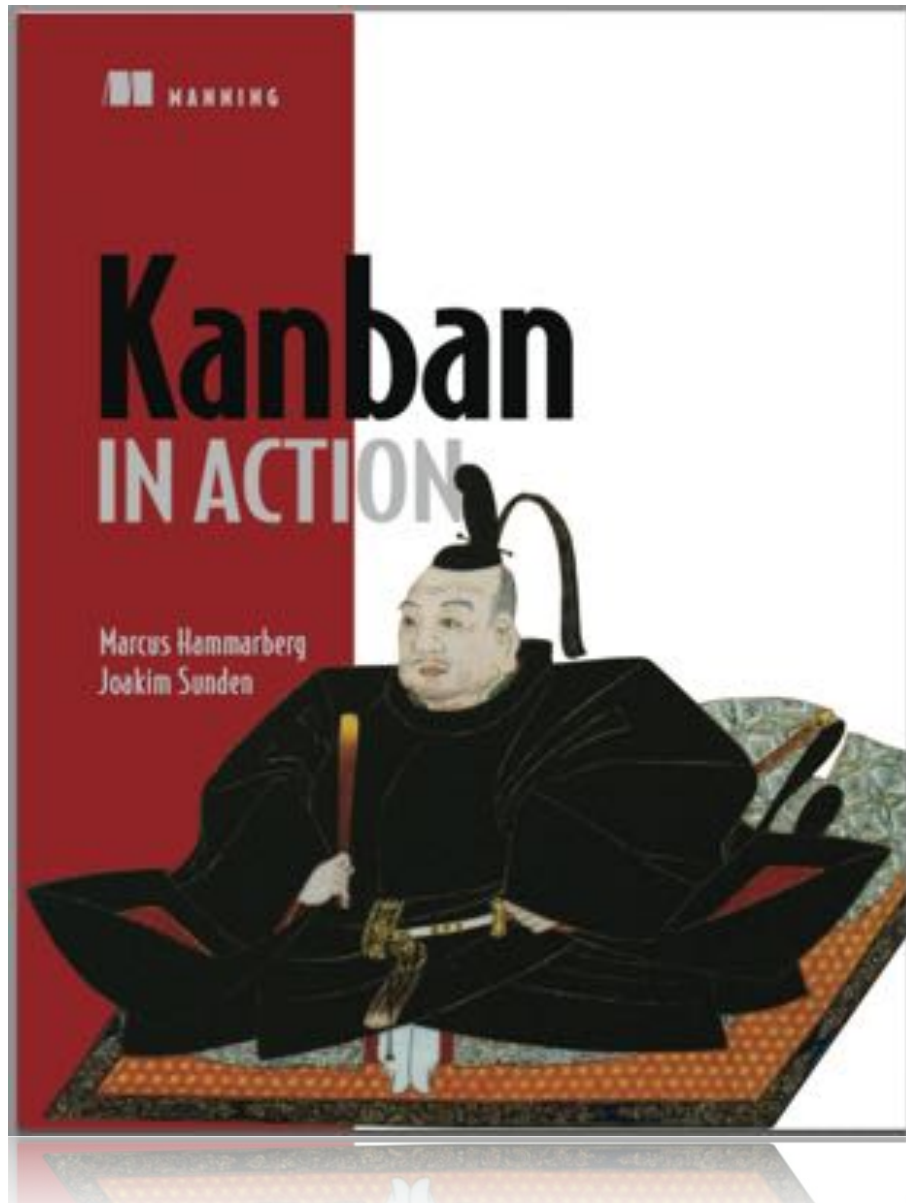


Microsoft  
**Windows 98**  
*Second Edition*



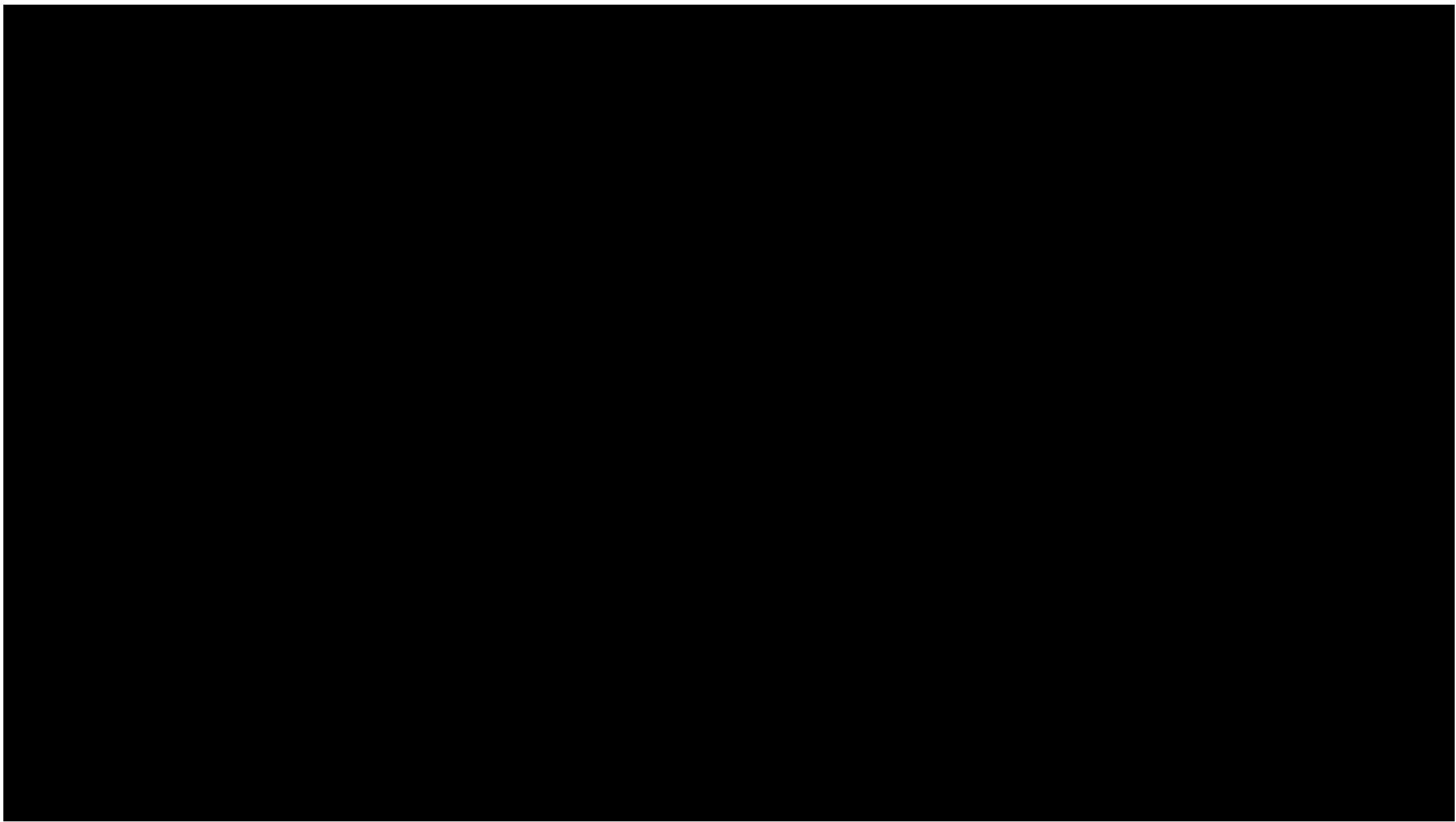


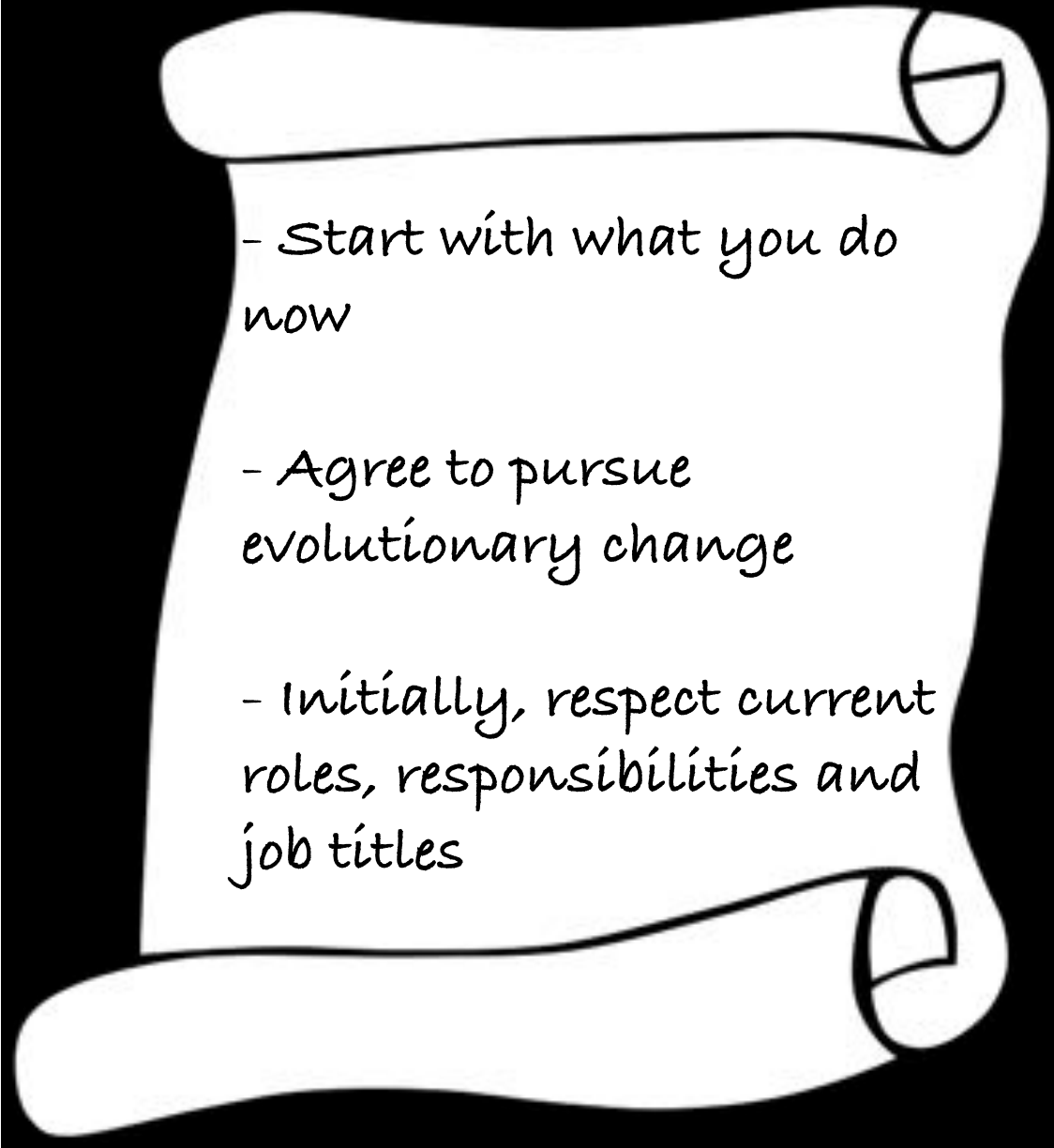




Use code  
ctwlkna16  
at [manning.com](https://manning.com)  
40% off



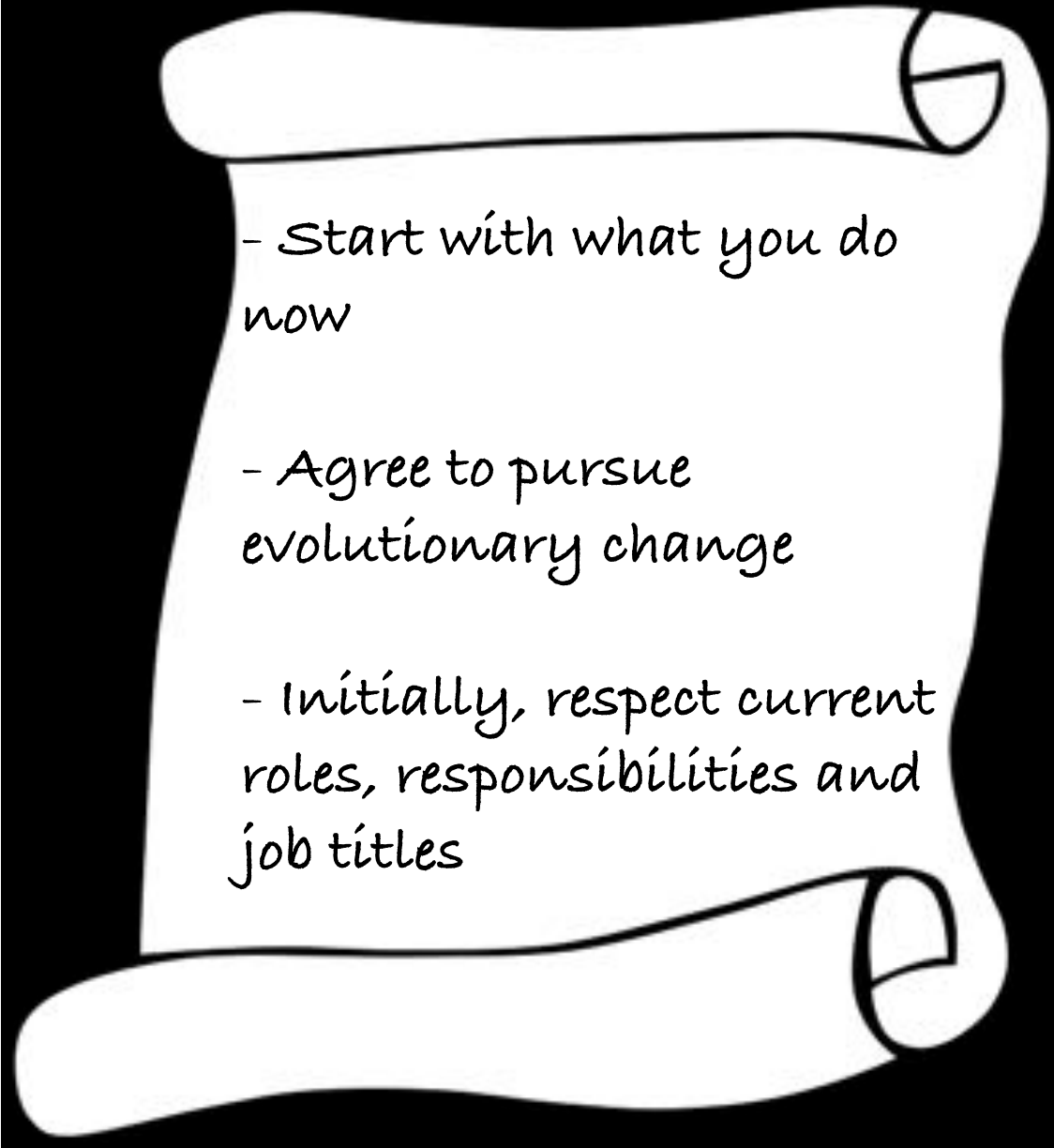




- Start with what you do now

- Agree to pursue evolutionary change

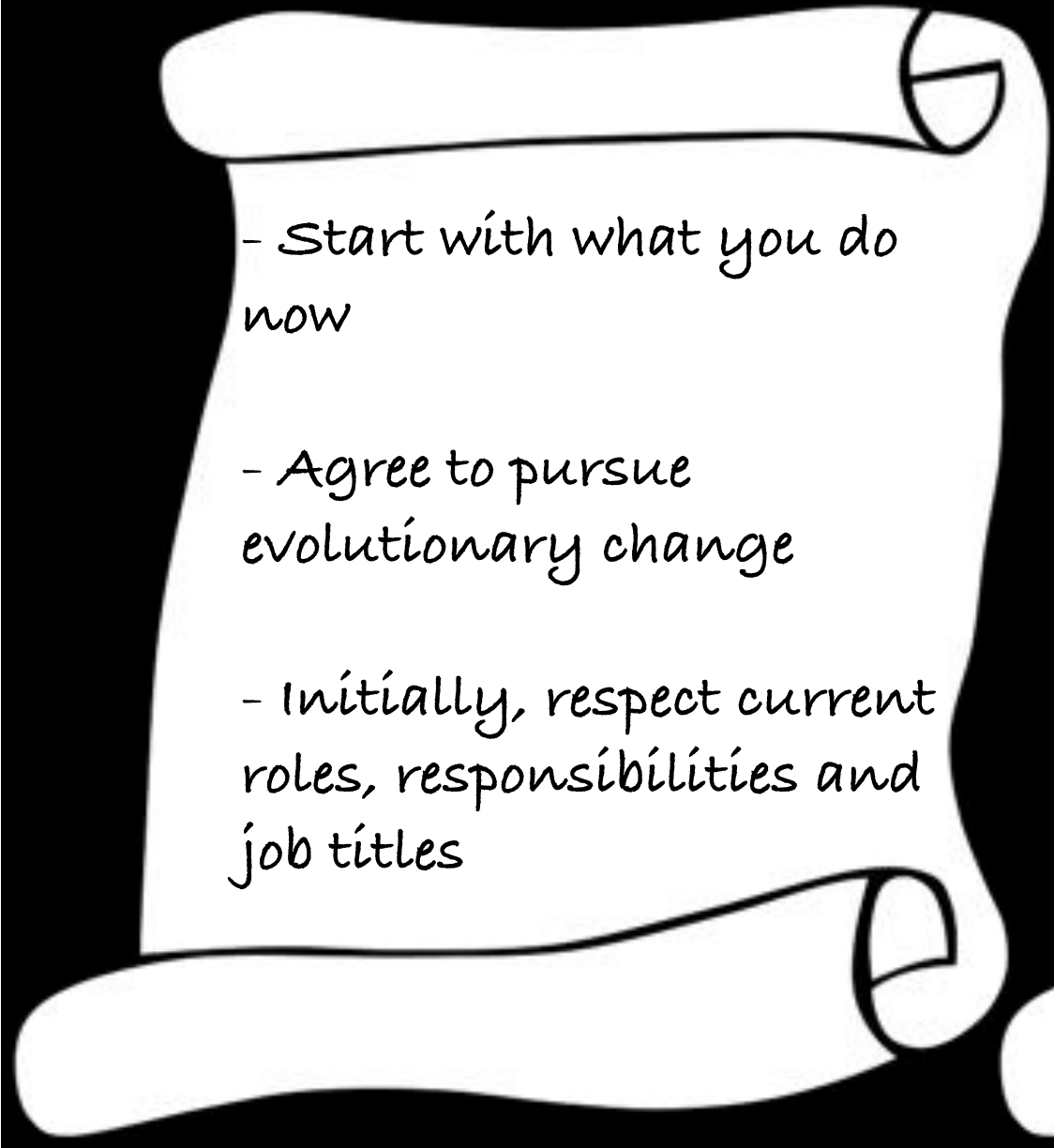
- Initially, respect current roles, responsibilities and job titles

A hand-drawn scroll with a black background. The scroll is white with a black outline and has a small circle at the top right and bottom right, indicating where it is rolled. The text is written in a casual, handwritten style.

- Start with what you do now

- Agree to pursue evolutionary change

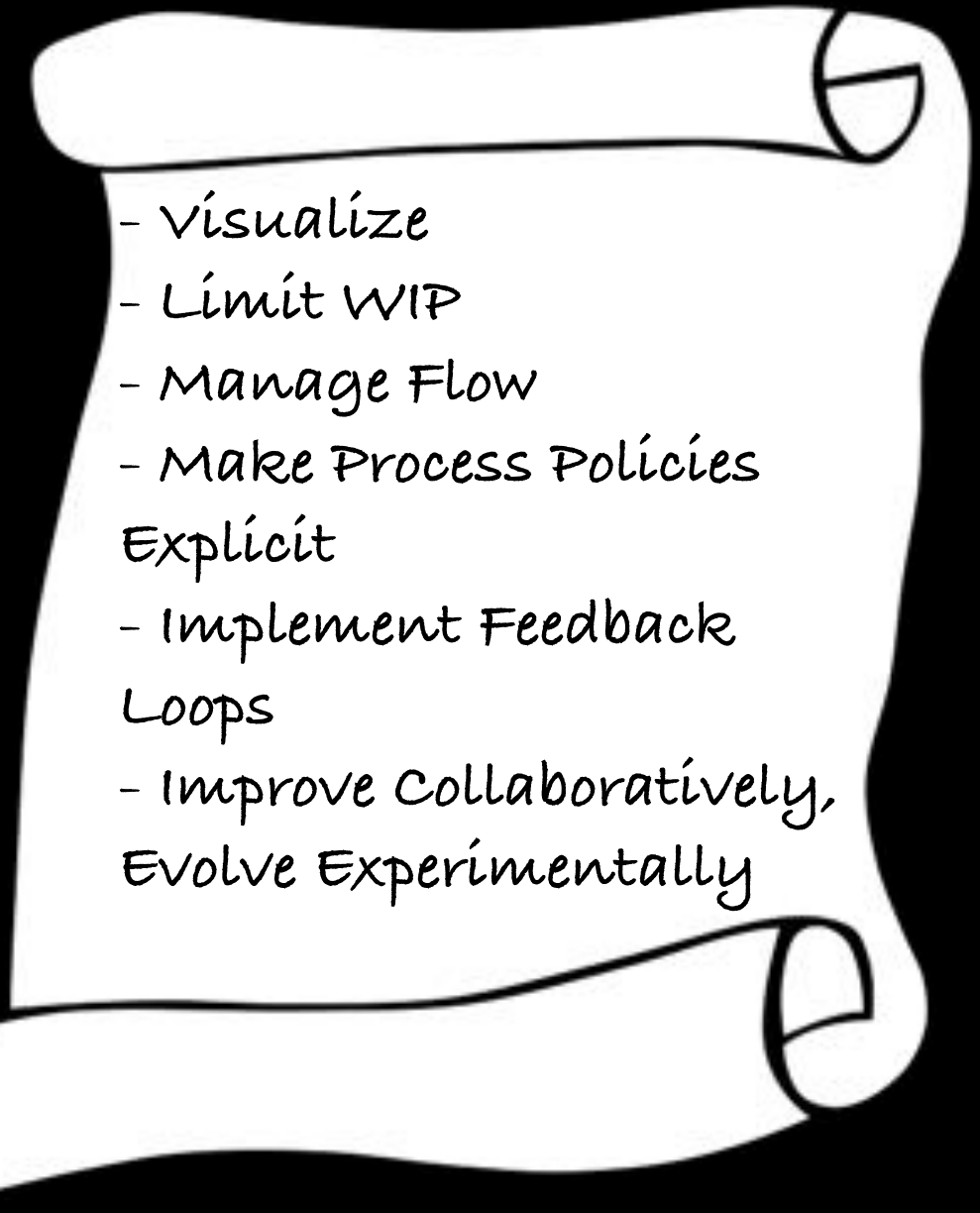
- Initially, respect current roles, responsibilities and job titles

A hand-drawn scroll graphic with a black border and a white interior. The scroll is unrolled, showing a list of three items. The top and bottom edges of the scroll are slightly curved, and there are small circles at the top and bottom right corners, suggesting where the scroll is tied or folded.

- Start with what you do now

- Agree to pursue evolutionary change

- Initially, respect current roles, responsibilities and job titles

A hand-drawn scroll graphic with a black border and a white interior. The scroll is unrolled, showing a list of five items. The top and bottom edges of the scroll are slightly curved, and there are small circles at the top and bottom right corners, suggesting where the scroll is tied or folded.

- Visualize

- Limit WIP

- Manage Flow


- Make Process Policies Explicit

- Implement Feedback Loops

- Improve Collaboratively, Evolve Experimentally



<http://blogs.ubc.ca/qualresearch/narrative-inquiry/the-storyteller/>



Start where  
you are!



By Joe Loong  
Used under CC

Start where  
you are!



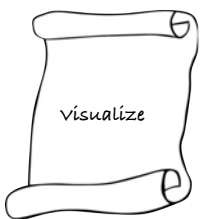


Start where  
you are!





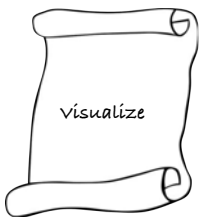
visualize



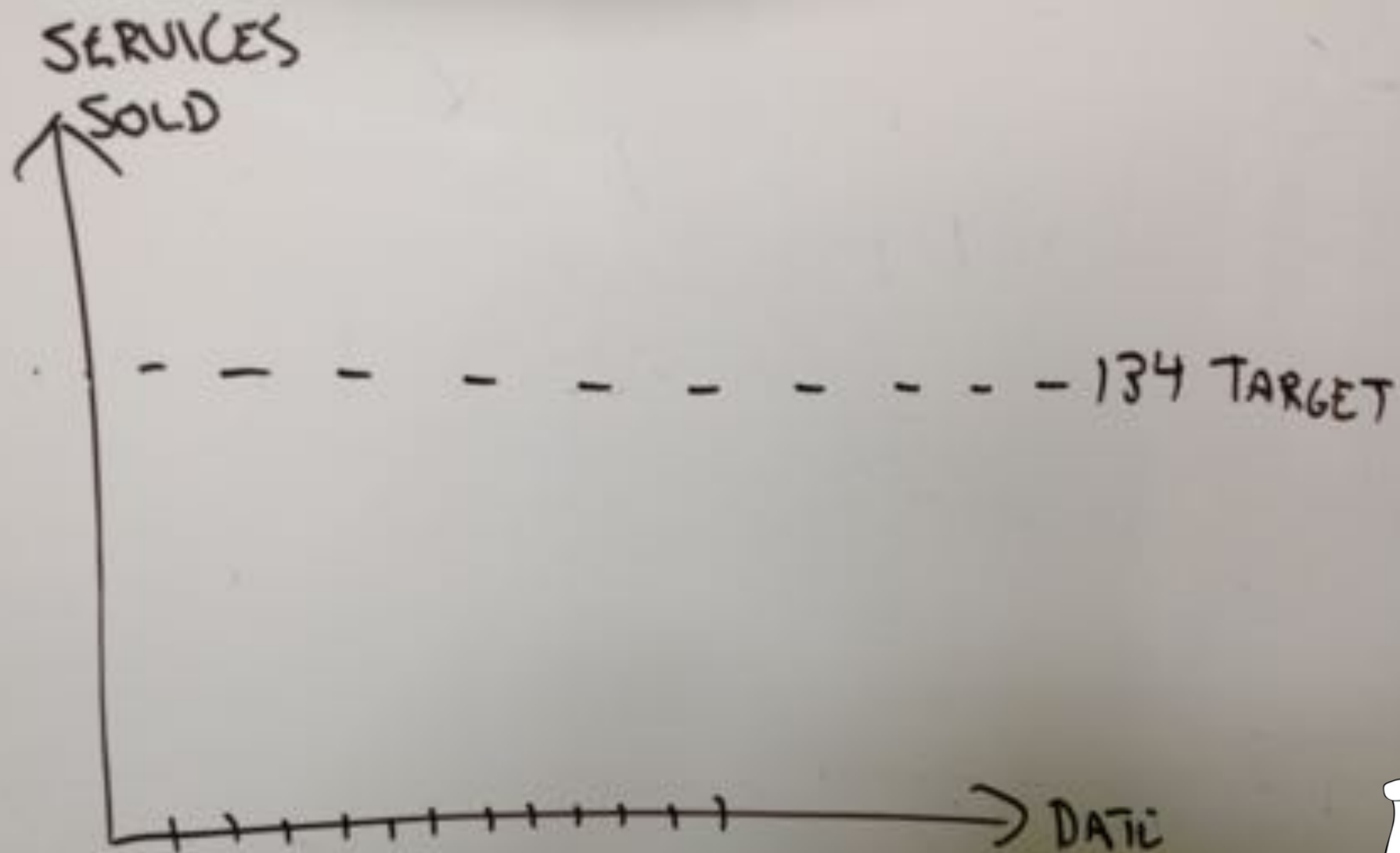


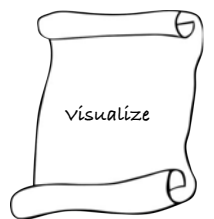
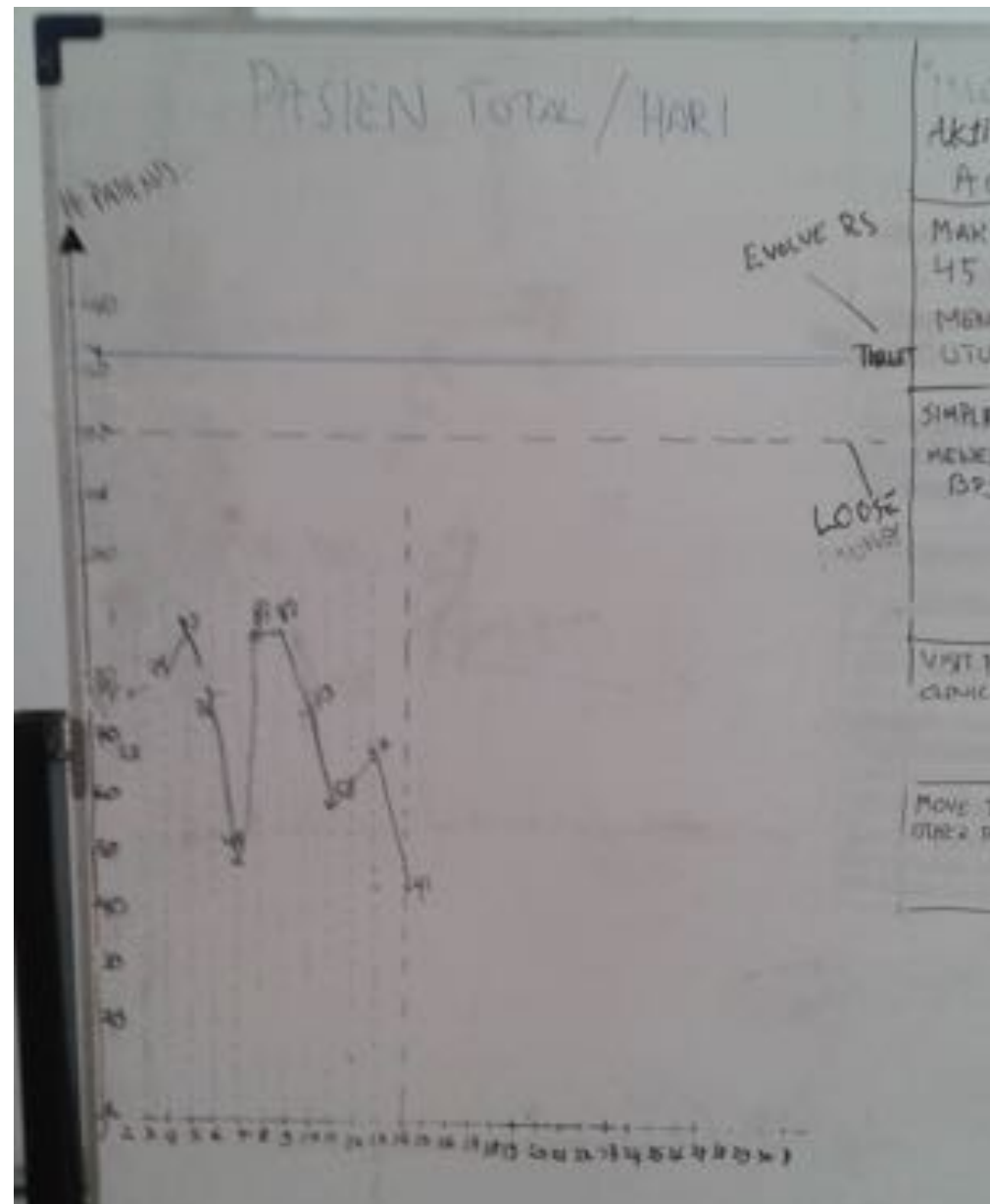


12.500.240.000 Rp.











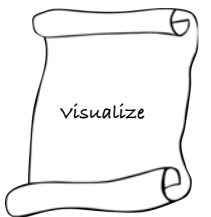
Start where you are

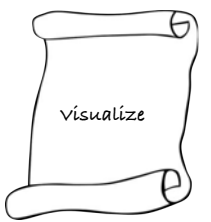
Understandable

Visualised

Transparency

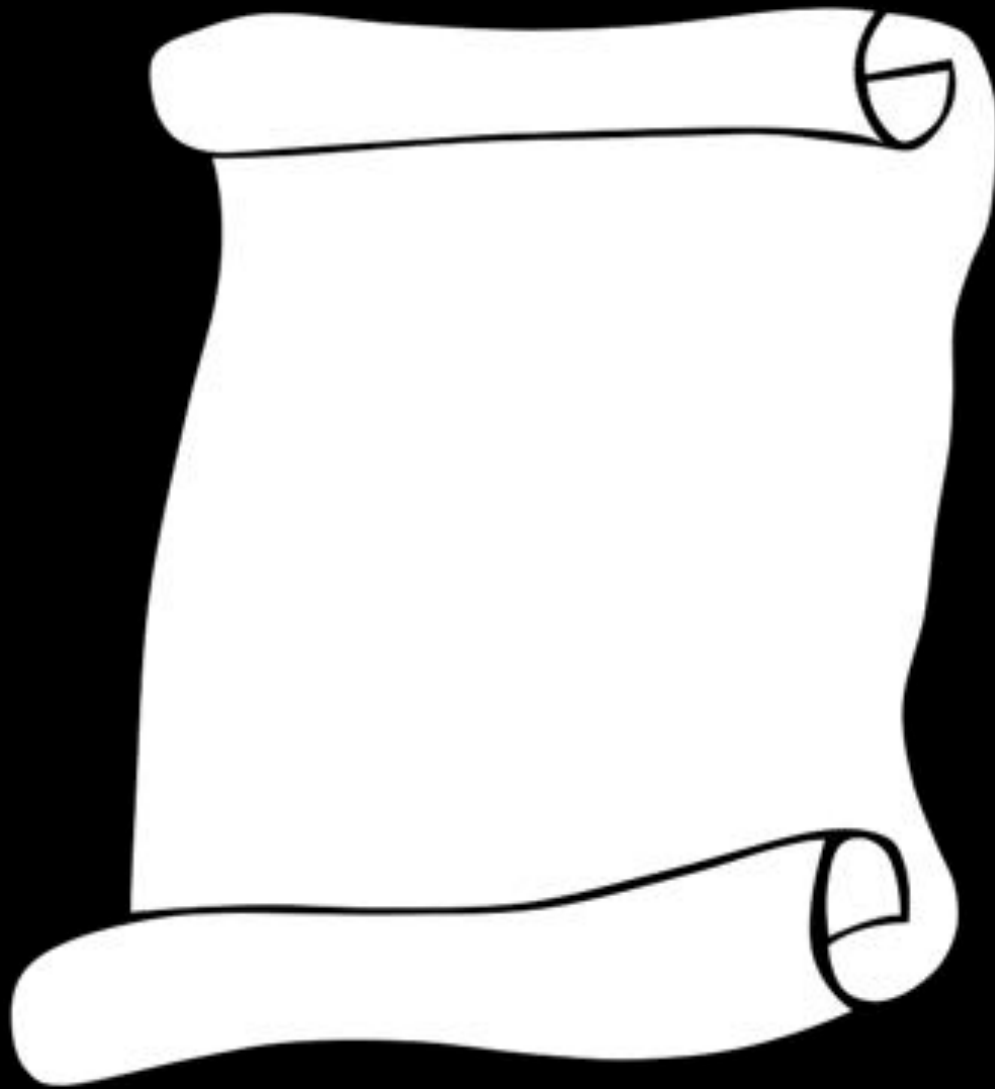
Indicator and trends





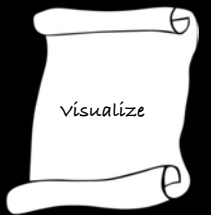
The code is more  
what you'd call  
"guidelines" than  
actual rules





# RS Bungsu

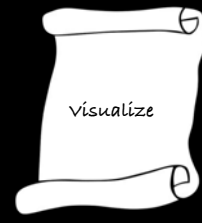
## visualisation pirate code





BIG

**RS Bungsu**  
**visualisation pirate code**



visualize



BIG  
EASY

RS Bungsu  
visualisation pirate code

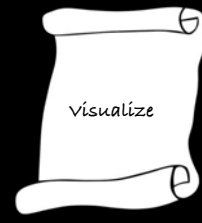


visualize



BIG  
EASY  
Trends

RS Bungsu  
visualisation pirate code

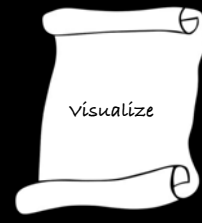


visualize



BIG  
EASY  
Trends  
Target

**RS Bungsu**  
**visualisation pirate code**

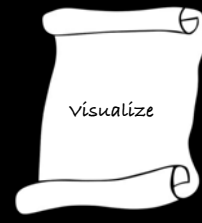


visualize



BIG  
EASY  
Trends  
Target  
Moves fast

**RS Bungsu**  
**visualisation pirate code**



visualize



Limit WIP

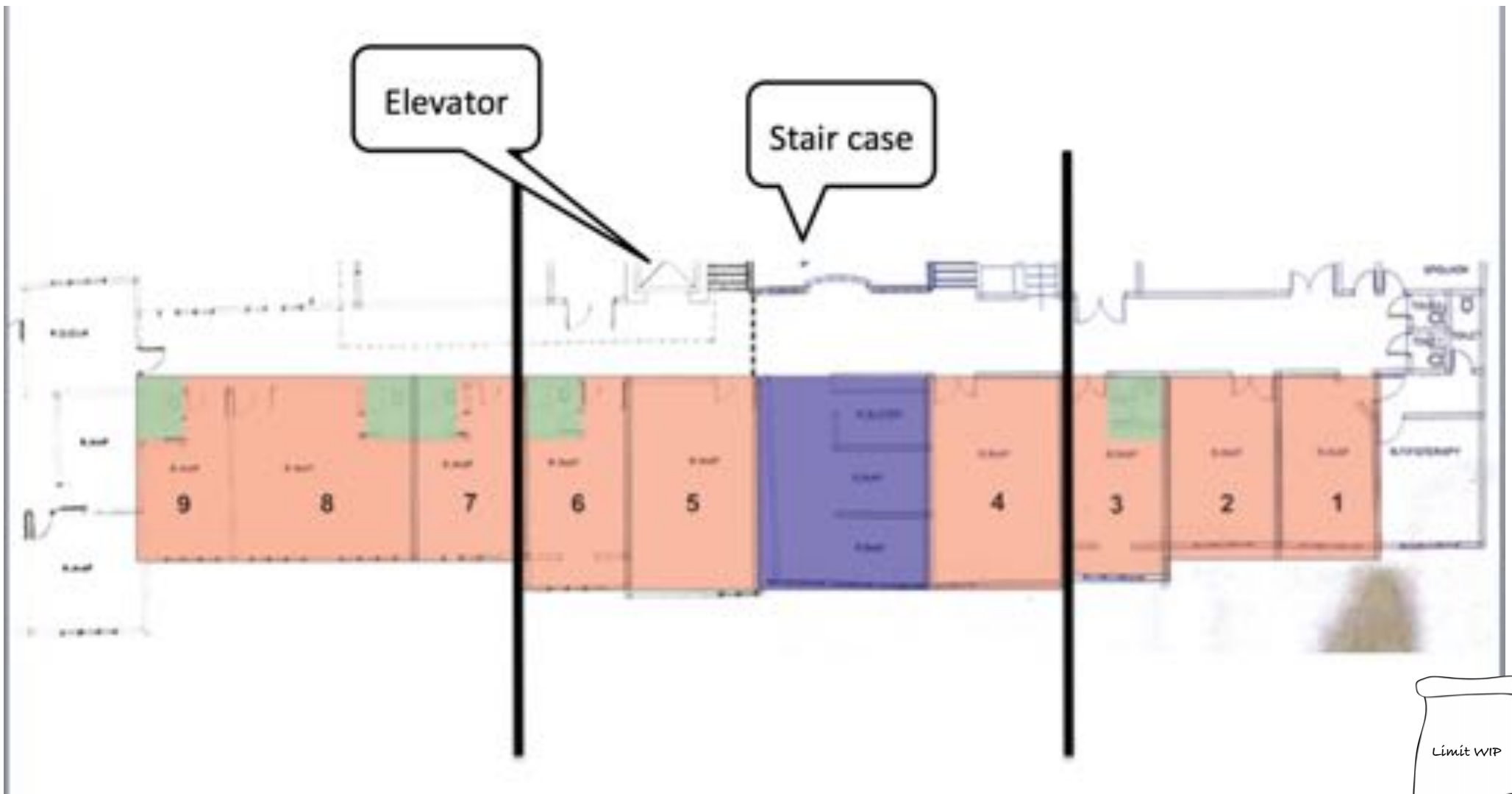








Limit WIP

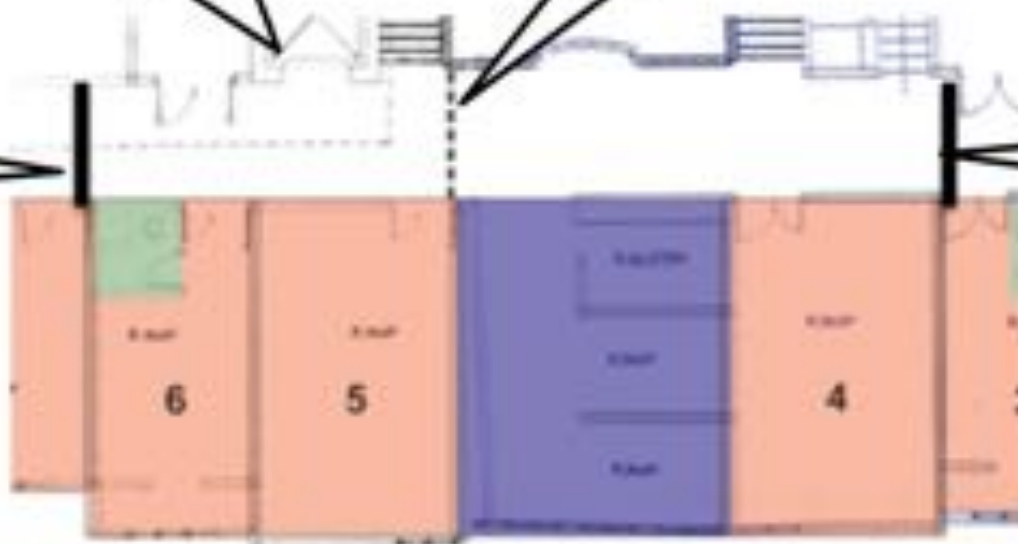


Can use elevator to  
get to all the rooms  
on the new rooms at  
second floor

Remove current  
temporary walls  
around the elevator

Close  
corridor  
here

Close corridor  
here

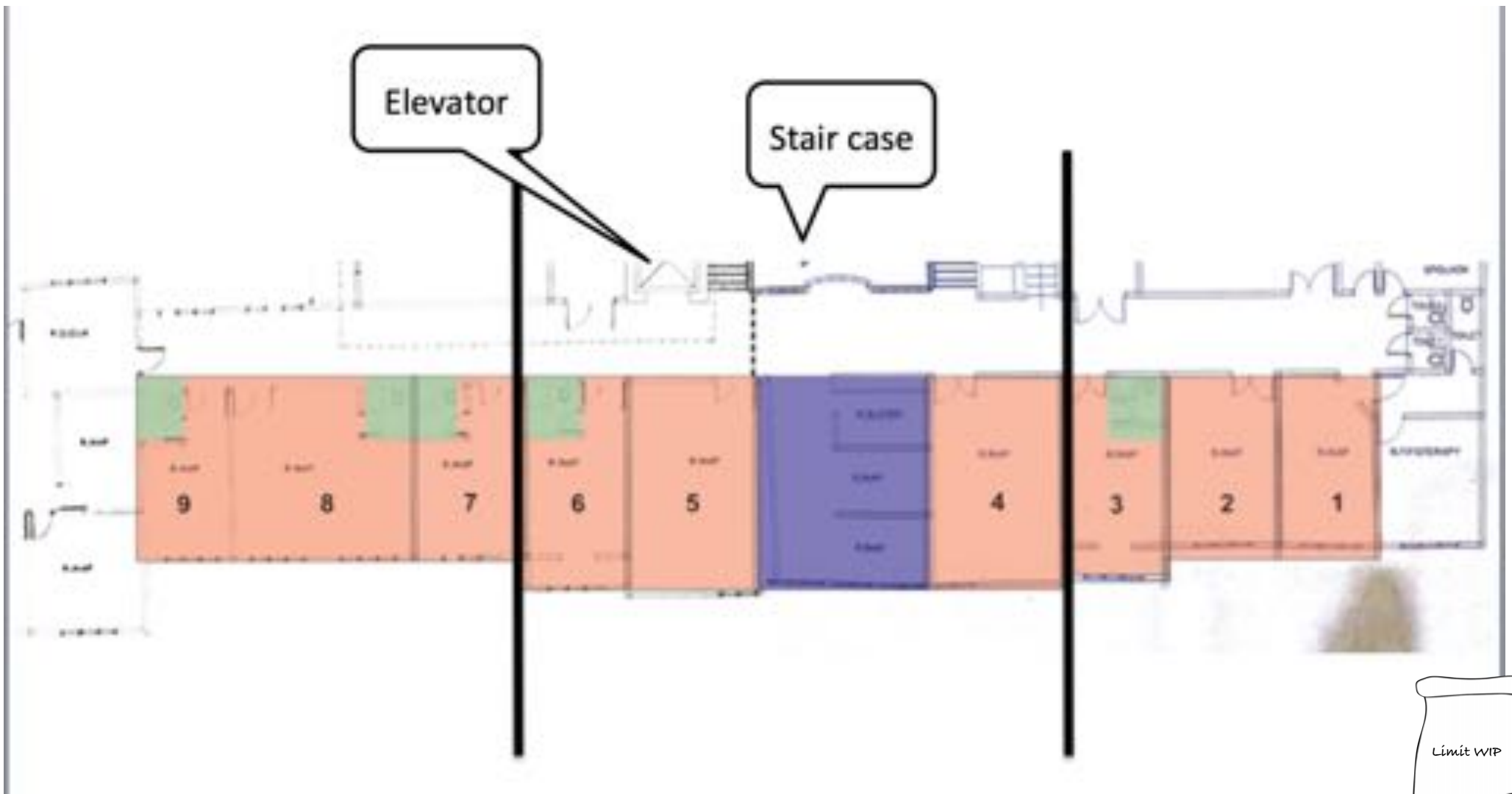


Limit WIP











Manage Flow



# Manage Flow

How to gain from  
your WIP pain

Learn with history



Manage Flow







Make Process  
Policies Explicit






# Move authority to the information



A close-up photograph of a hand pointing its index finger at a map. The map is spread out on a surface, and the hand is positioned on the right side of the frame. The background is blurred, showing warm, out-of-focus lights (bokeh).

# Move authority to the information

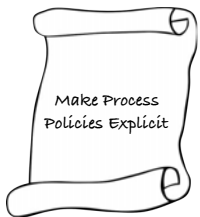
A small, stylized icon of a rolled-up scroll with a ribbon tied around it.

Make Process  
Policies Explicit

# Structure and communication

Make Process  
Policies Explicit

# Make policies explicit



# Limit work in process





**Marcus Hammarberg**

@marcusoftnet



Follow

Introducing [#kanban](#) made a person cry of relief today. Never had that before, but I guess 10 years of being swamped with work wears you down

6:34 AM - 21 Sep 2015



11



12



# The outcome?







# What happened here, really?



# What happened here, really?

## Move authority to the information



# What happened here, really?

Move authority to the information  
Trust, transparency & accountability



# What happened here, really?

Move authority to the information

Trust, transparency & accountability

Make policies explicit



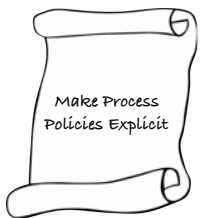
# What happened here, really?


Move authority to the information

Trust, transparency & accountability

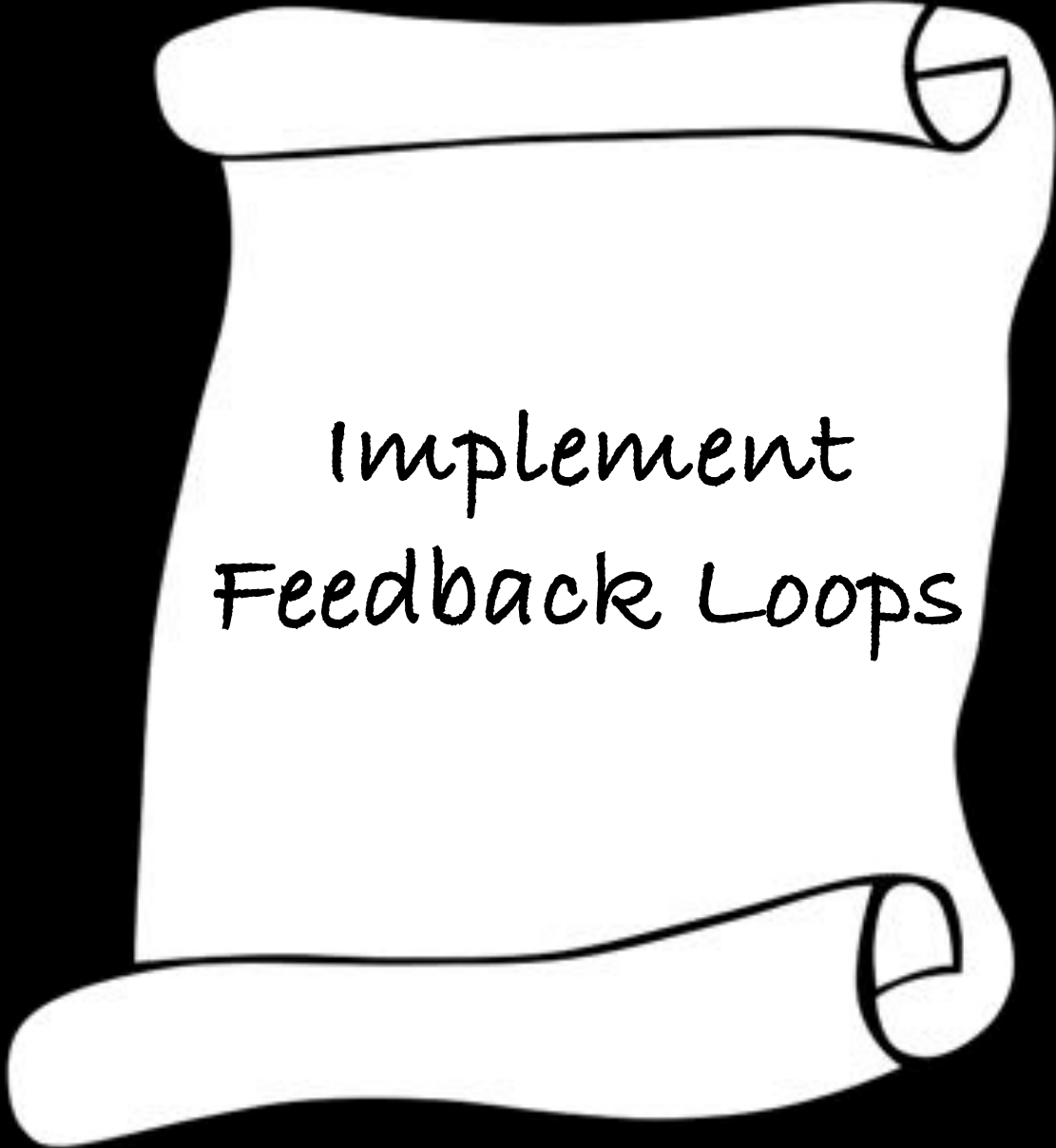
Make policies explicit

Limit work in process



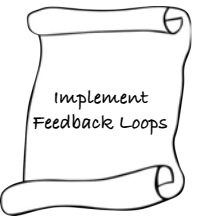
A hand-drawn scroll with a white background and a black outline, set against a solid black background. The scroll is unrolled, showing text in a handwritten style. The text is centered and reads: "Initially, respect current roles, responsibilities and job titles".

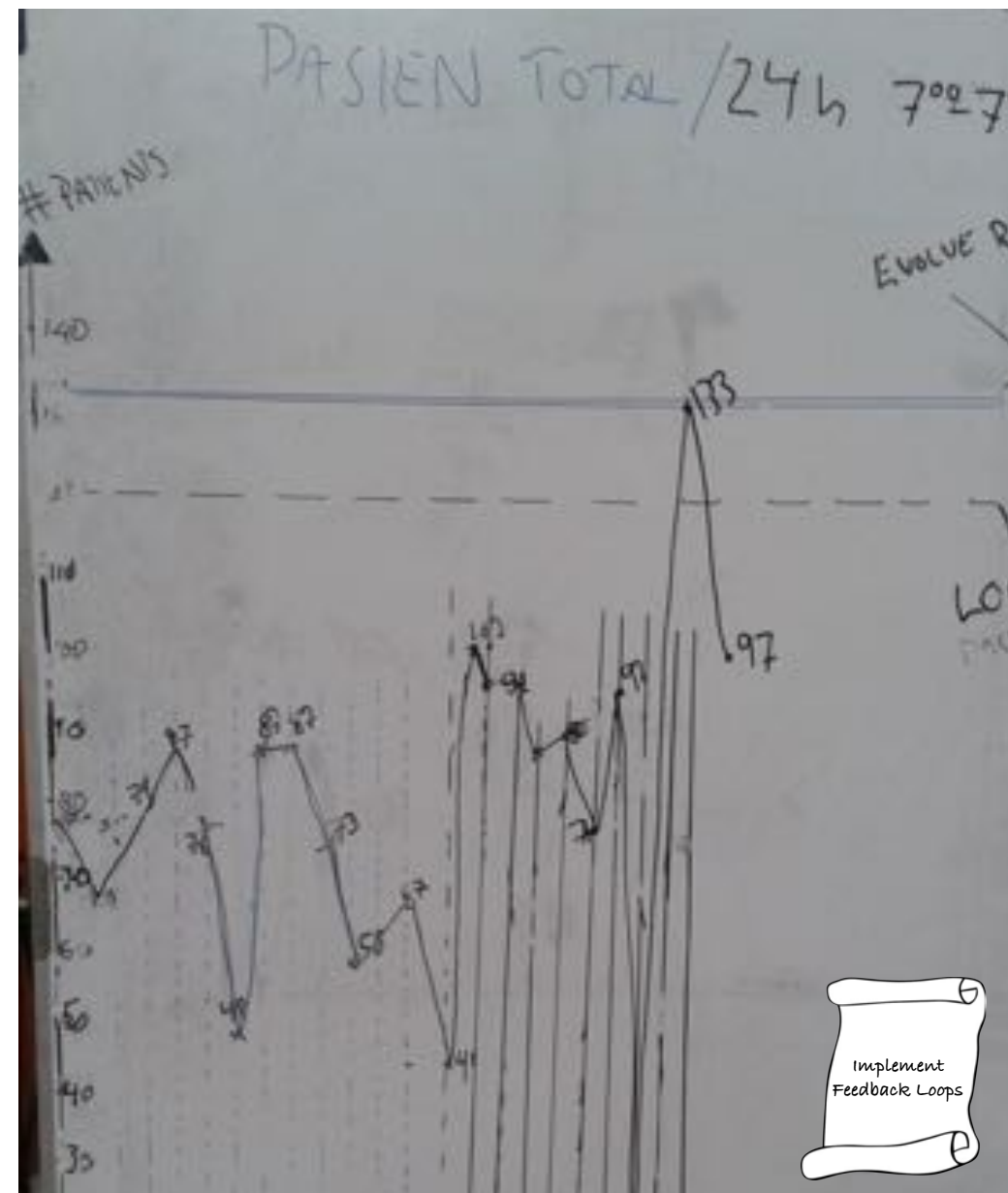
Initially, respect  
current roles,  
responsibilities  
and job titles



Implement  
Feedback Loops

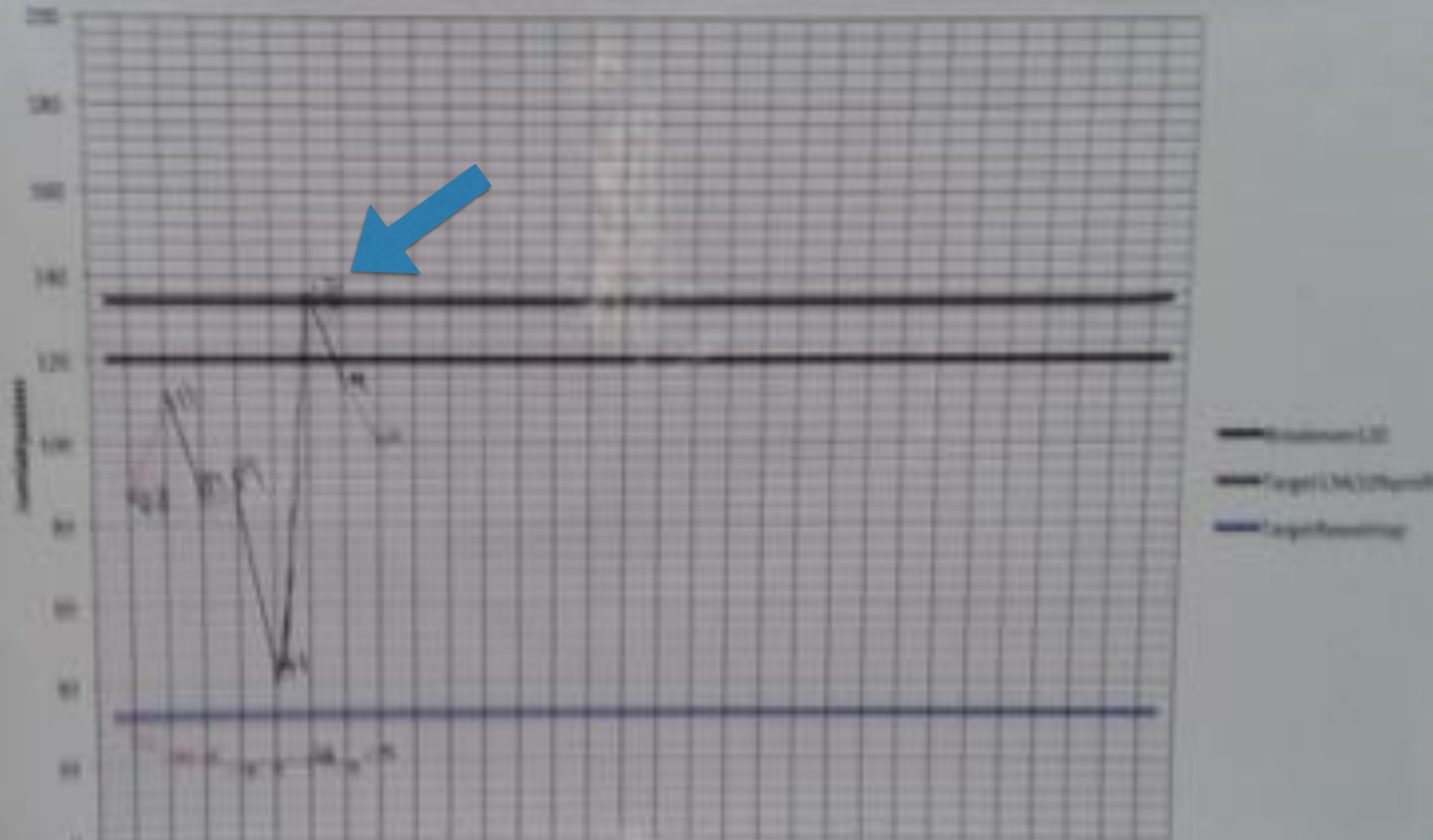
A hand-drawn white scroll with a black outline, featuring a rolled-up top-right corner and a bottom-right corner. The text "Implement Feedback Loops" is written in a black, handwritten-style font in the center of the scroll. The scroll is set against a solid black background.





Jumlah Pasien/24h(07:00-07:00), Bulan Oktober 2014

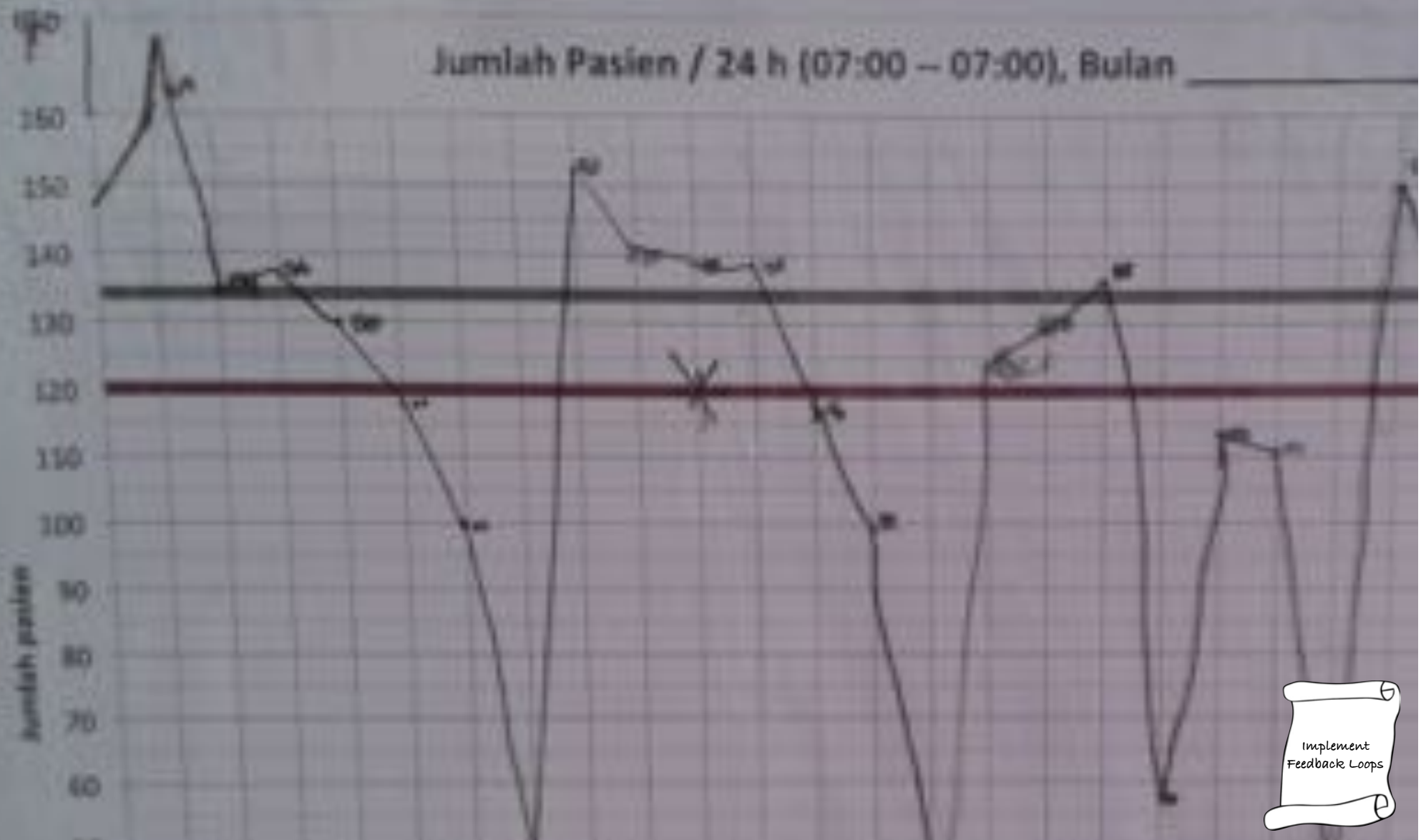
th 7027



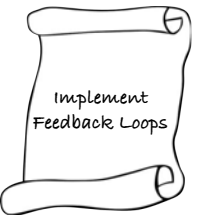
EVOLVE R

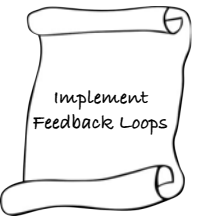
LO  
PAC

Implement  
Feedback Loops



# What is the goal of a hospital?





Number of  
patients served  
(finance)

Quality

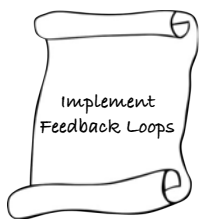
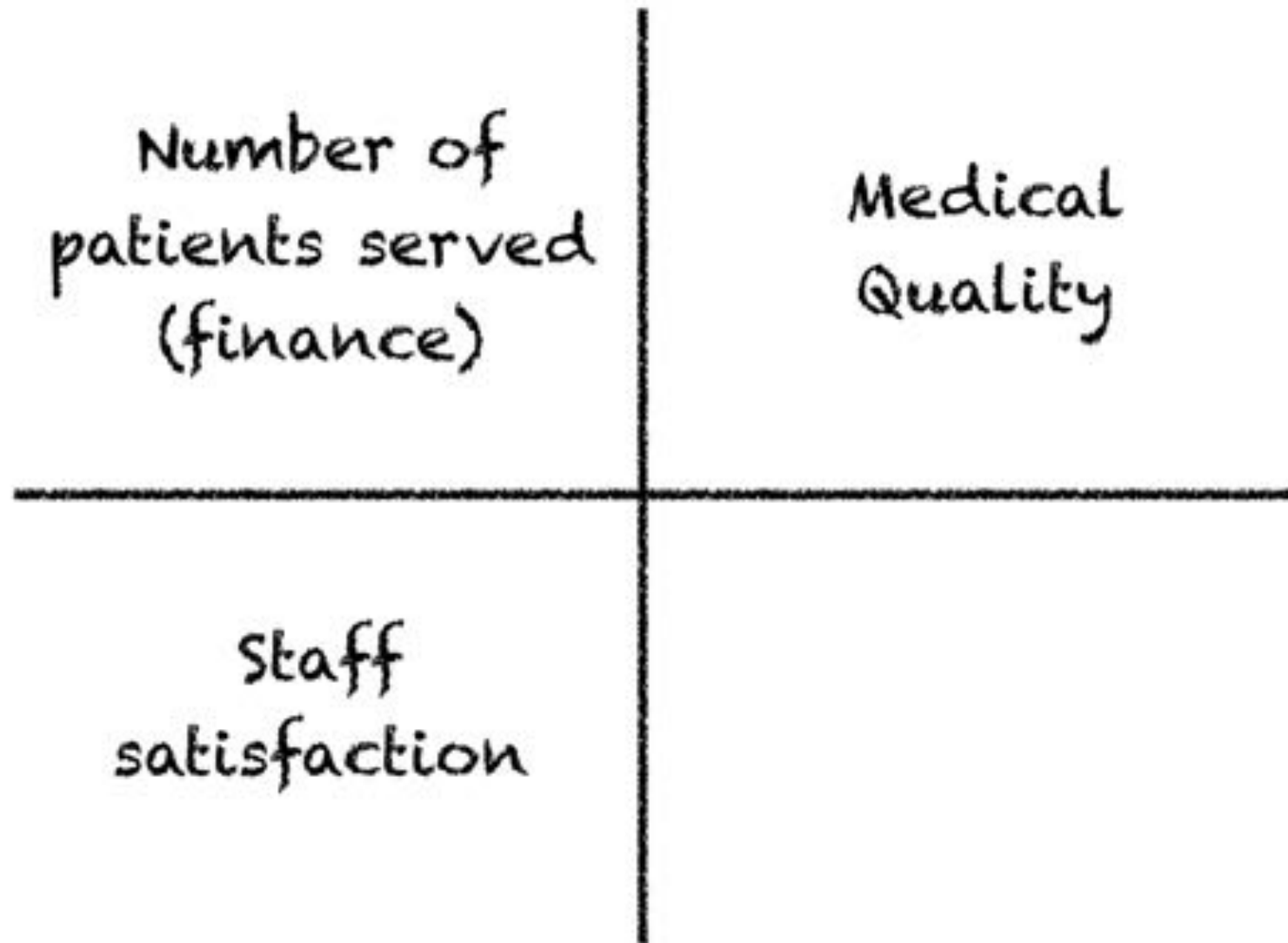
Implement  
Feedback Loops

Number of  
patients served  
(finance)

Medical  
Quality

Staff  
satisfaction

Implement  
Feedback Loops



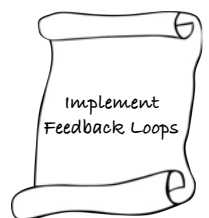
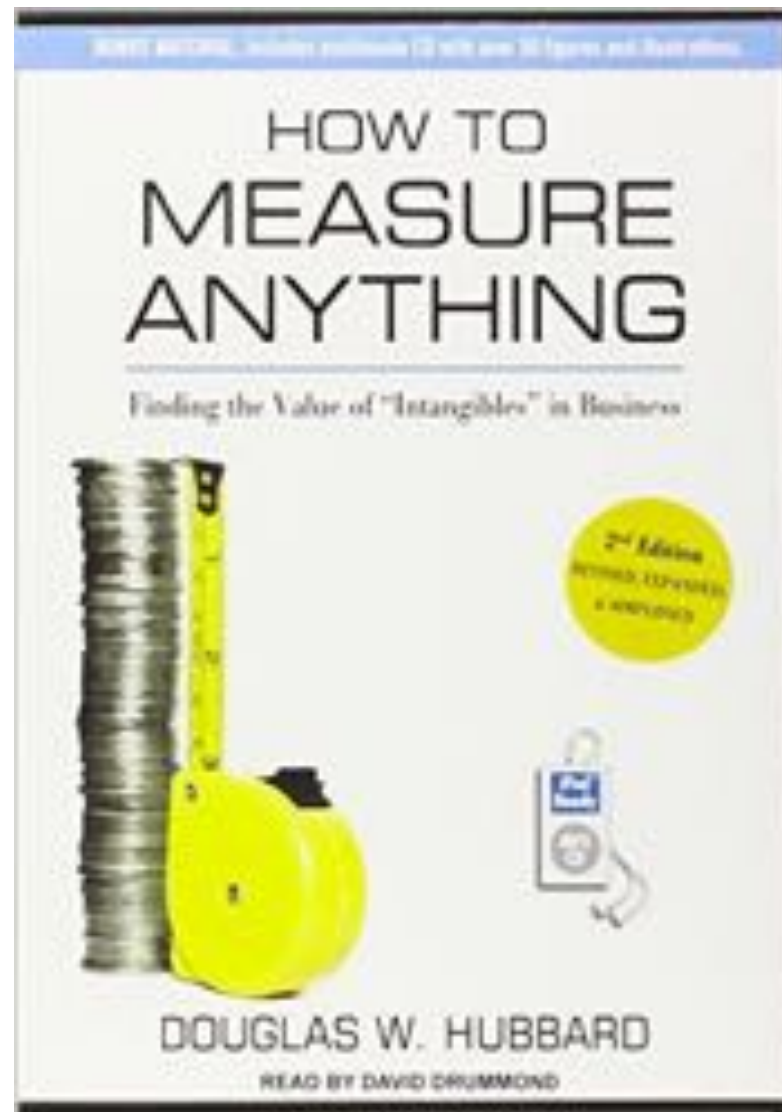
Number of  
patients served  
(finance)

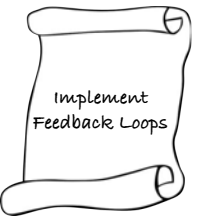
Medical  
Quality

Staff  
satisfaction

Pastoral  
quality

Implement  
Feedback Loops





Number of  
patients served  
(finance)

Medical  
Quality

Staff  
satisfaction

Pastoral  
quality

Implement  
Feedback Loops



Implement  
Feedback Loops

A hand-drawn white scroll with a black outline, featuring a rolled-up top and bottom edge. The scroll is centered on a solid black background. The text is written in a casual, handwritten style.

Improve  
collaboratively,  
Evolve  
Experimentally

---

Income

Profit - Yah!

---

Cost



Profit - Yah!

Income  
Cost



Profit - Yah!

Cost

Income

Improve  
Collaboratively.  
Evolve  
Experimentally

===== Cost

===== Income



ADA	KENAIKAN	HYPOTHESIS	EXPERIMENT TUGAS	REMARKS
Meningkatkan Jumlah pasien Op	Masih membutuhkan pasien, masih ada di bawah target	Jumlah pasien meningkat Pendapatan RS meningkat Jumlah px Operasi meningkat 5 pasien per 1	<ol style="list-style-type: none"> <li>1. Studi banding Tarif OK ke RS Korp. Buncit</li> <li>2. Melakukan efisiensi untuk paket Bedah Mendekat" pasien BPJS. - bedah &amp; obgyn</li> <li>3. Melakukan pendekatan ke Dinas Kesehatan w/ mendapatkan alat GRATIS.</li> </ol>	di Lika di Sumatra tllg.
Keadan Mutu & Biaya	Terkendalanya Mutu dan biaya ke pasien	Dengan adanya Clinical Pathway maka mutu pelayanan dan biaya akan terkontrol.	<p>Clinical Pathway untuk Terencana</p> <ul style="list-style-type: none"> <li>1. TSC</li> <li>2. TSC</li> <li>3. TSC</li> </ul> <p>- Dapat Minggu (Kamis) Jan 11. <u>VENI</u> - 04-05-2020 di RUMAH</p>	
pasien meningkat	Pasien & alat yang diberikan RSP	<ul style="list-style-type: none"> <li>&gt; JUMLAH PASIEN</li> <li>12. 70</li> </ul>	<ul style="list-style-type: none"> <li>- 11 Pcs</li> <li>- 10 Pcs</li> <li>- 10 Pcs</li> </ul>	<p>Revisi dan Tahap Revisi Sedikit 100% ke 100% Sedikit 100% ke 100% Sedikit 100% ke 100%</p>

## Hypothesis driven business

### Apa

What is this thing we're doing?  
Something that improves the hospital

### Kenapa

Why are we doing this?

### Hypothesis

What do we think will happen with our measurements if we do this?  
What should we measure? How?  
New metric?

### Experiment

What is the next little thing (< 2 w)  
that we can try to see if our hypothesis is true or false?

APA	KENAPA	HYPOTHESIS	EXPERIMENT	TUGAS
akan di		Jumlah pasien meningkat Pendapatan RS meningkat Jumlah px Operasi me- ningkat 5 pers-pers	1. Studi banding Tarif OK ke RS Kari 2. Melakukan efisiensi untuk paket Bedah Mendekat" pasien BPJS. -bedah & obgyn 3. Melakukan pendekatan ke Dinas Kesehatan tanpa mendapatkan alat GRATIS	di Lika di Sunda tllg.
Maka maka	Dengan adanya Clinical Pathway maka maka maka pelayanan dan biaya akan terkendali		Clinical Pathway untuk tercepat 1. TC 2. Spinal 3. Bedah - Dapat Minggu (Kabis) Jan 11. (Veni) - 14-15 G. Nid.	
E. Dap P. Dap		> JUMLAH PASIEN 12. 70 Bedah/ha	- 11 Pcs - 10 Pcs - 10 Pcs	Pembuatan 1. 10 Pcs 2. 10 Pcs 3. 10 Pcs 4. 10 Pcs

Improve  
Collaboratively.  
Evolve  
Experimentally

## Hypothesis driven business

### Apa

What is this thing we're doing?  
Something that improves the hospital

### Kenapa

Why are we doing this?

### Hypothesis

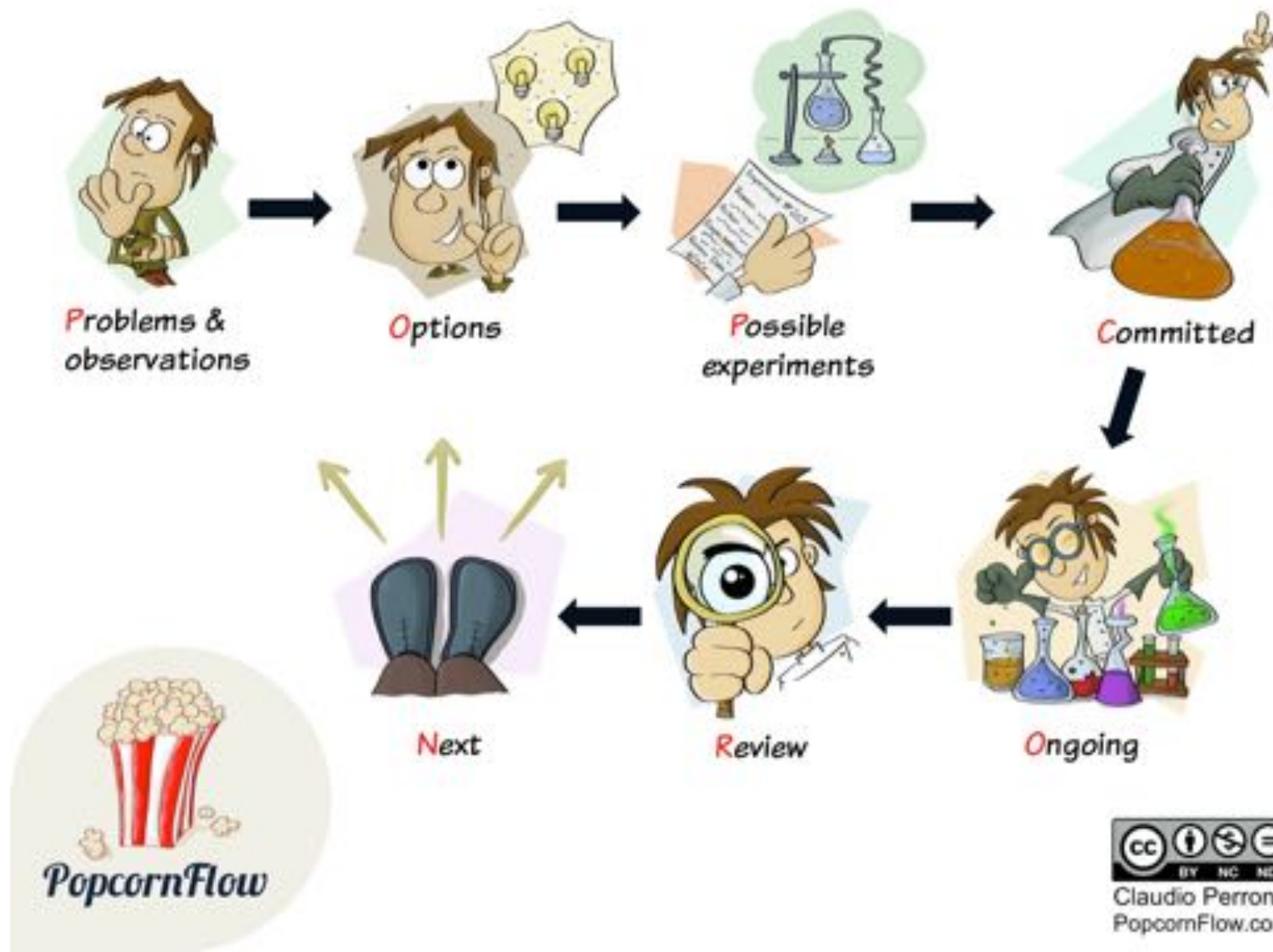
What do we think will happen with our measurements if we do this?  
What should we measure? How?  
New metric?

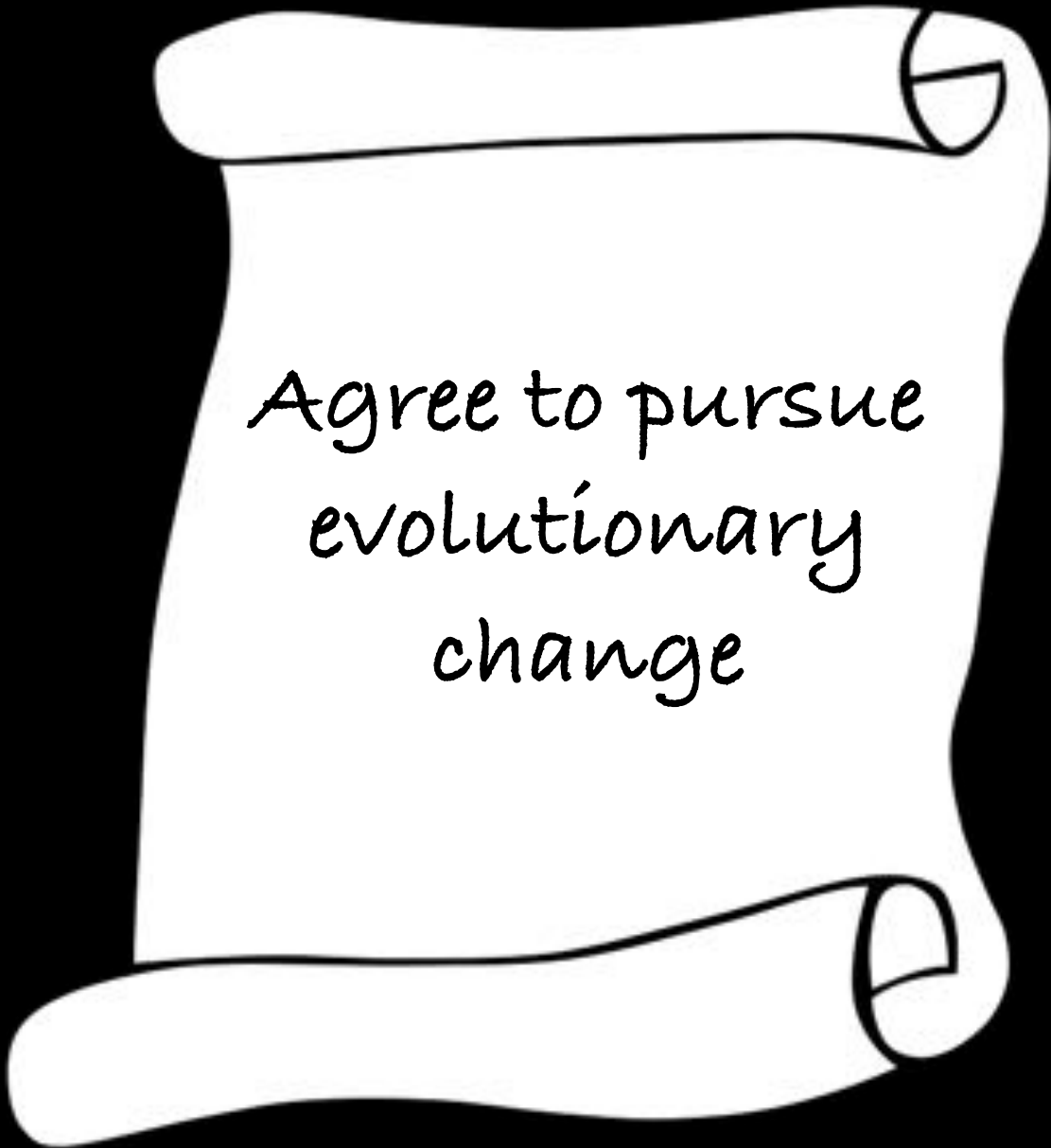
### Experiment

What is the next little thing (< 2 w)  
that we can try to see if our hypothesis is true or false?


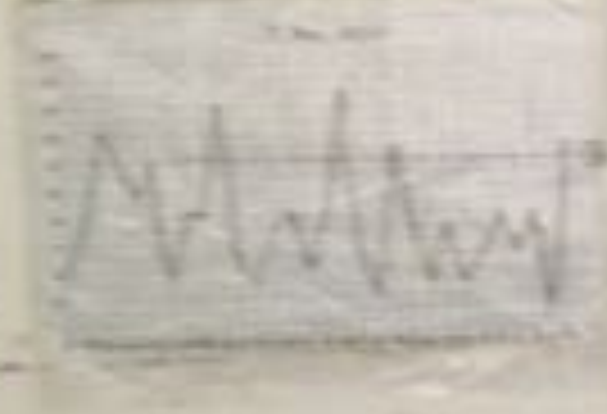
APA	KENAPA	HYPOTHESIS	EXPERIMENT	TUGAS
akan di		Jumlah pasien meningkat Pendapatan RS meningkat Jumlah px Operasi me- ningkat 5 pers-pers	1. Studi banding Tarif OK ke RS Kari 2. Melakukan efisiensi untuk paket Bedah Mendekat" pasien BPJS. -bedah & obgyn 3. Melakukan pendekatan ke Dinas Kesehatan tanpa mendapatkan alat GRATIS	di Lika di Sunda tgg.
Maka maka	Dengan adanya Clinical Pathway maka maka maka pelayanan dan biaya akan terkendali		Clinical Pathway untuk tercepat 1. TC 2. Spinal 3. Bedah - Dapat Minggu (Kabis) Jan 11. (Veni) - 14-15 G. N. -	
E. D. P. P. D. P.		> JUMLAH PASIEN 12. 70 Bedah/ha	- 11 Pcs - 10 Pcs - 10 Pcs	Pembuatan 1. Bedah 2. Bedah 3. Bedah 4. Bedah 5. Bedah

Improve  
Collaboratively,  
Evolve  
Experimentally



A hand-drawn white scroll with a black outline, featuring a rolled-up top and bottom edge. The scroll is centered on a solid black background. The text "Agree to pursue evolutionary change" is written in a black, handwritten-style font across the middle of the scroll.

Agree to pursue  
evolutionary  
change



Topic	Concepts	Formulas	Notes
Resistor Load	Load resistor value, not the actual load	Load power calculated as $P = I^2 R$	Resistor value should be greater than the actual load
Load Factor	Percentage of the rated power	Load factor calculated as $\frac{P_{avg}}{P_{max}}$	Load factor should be greater than 0.5
Power Factor	Ratio of real power to complex power	Power factor calculated as $\cos \phi$	Power factor should be greater than 0.9

Agree to pursue  
evolutionary  
change



Agree to pursue  
evolutionary  
change

THE END




.OIKOSOIFY



# The Bungsu Story How To Use Lean & Kanban To Quickly Boost Results For Any Business, Beyond The I.T. Department...

The Unlikely Story Of How Lean And Kanban Quickly  
Saved A Failing Hospital In Indonesia

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[marcus.hammarberg@aptitud.se](mailto:marcus.hammarberg@aptitud.se)

aptitud