



Introduction of Dutch approach to Why, How & What

New Dutch generation of  
anti-microbial coatings



Why, how & what in 35 minutes

Mike Frankhuizen  
Managing director of Inducoat  
B.V.



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Leader in surface hygiene



Foundation of it all = Why?

Why anti-microbial  
coatings?



1

2

3

Why we started  
Inducoat?

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The more you know, the more  
you know you don't know.

Aristotle

“ quotefancy

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# The Empire of the Bacteria...

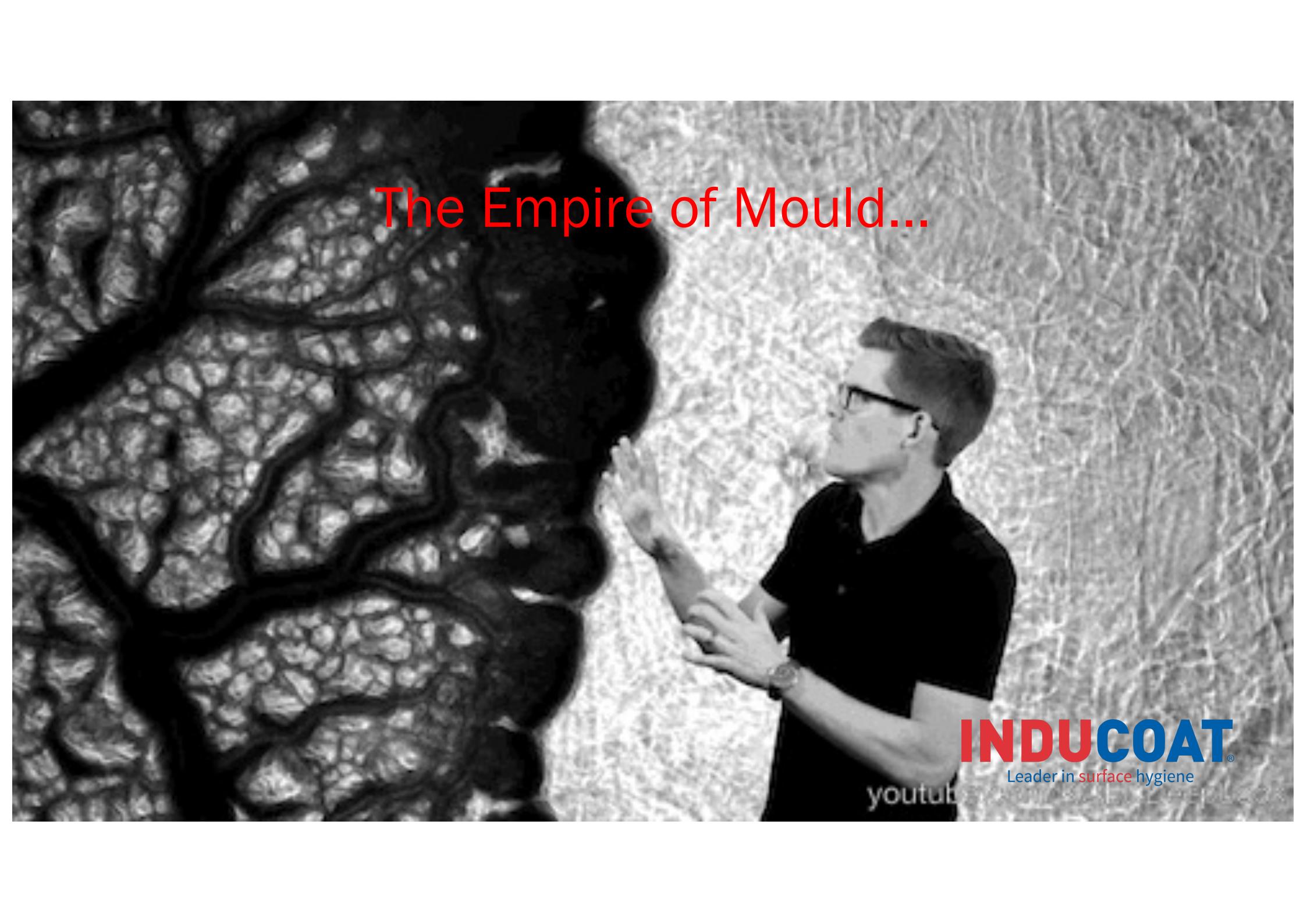


MAKE GIFS AT GIFSOUP.COM



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The Empire of Mould...

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[youtube](https://www.youtube.com/@inducotv)

2



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## Salmonella outbreak in US and Netherlands tied to smoked salmon

Published October 02, 2012 / Associated Press

Smoked salmon tainted with salmonella bacteria has sickened



Food Safety Authority of Ireland - News, views, ...



Salmon product sold in Ireland urgently recalled



Food Safety Authority of Ireland - News, views, ...



Food Safety Authority of Ireland - News, views, ...



Spinach recall issued over bacteria ...

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3



Coatings!?

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10



Esthetics....

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## Conservation

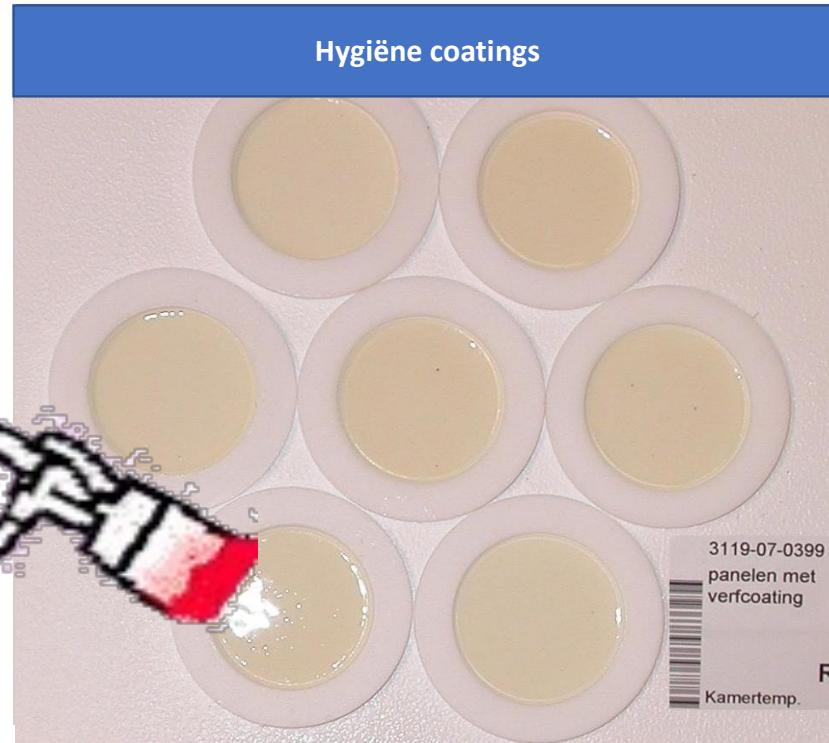
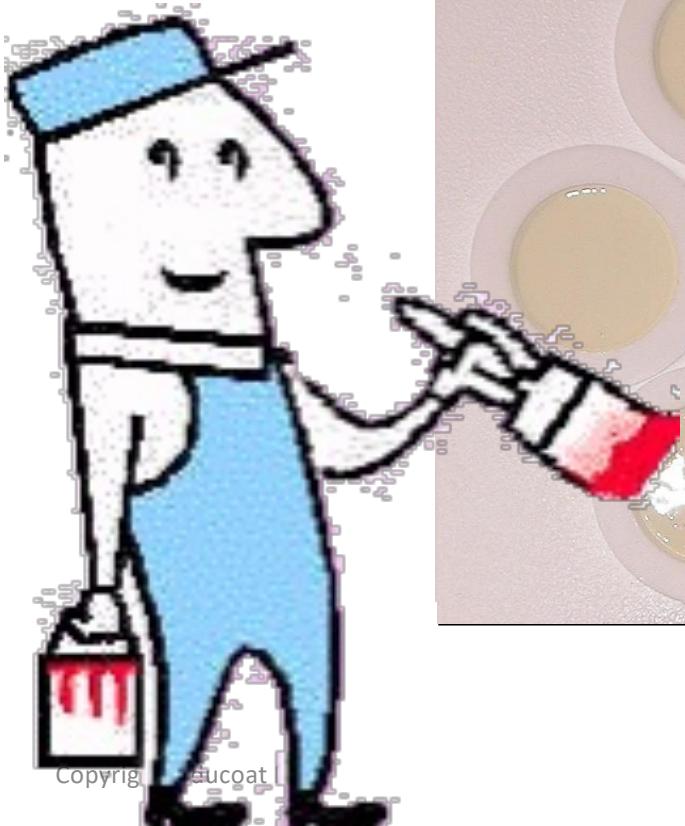
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Today:  
Antimicrobial

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# The ONE slide to remember today...



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Meet Han.





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Han was ill...



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This was Han's last  
room...



His room was painted with a  
“regular paint”

---



This is John.





He is director of  
ABBOTT Zwolle





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They produce baby  
food



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All areas are painted with  
anti-bacterial coating



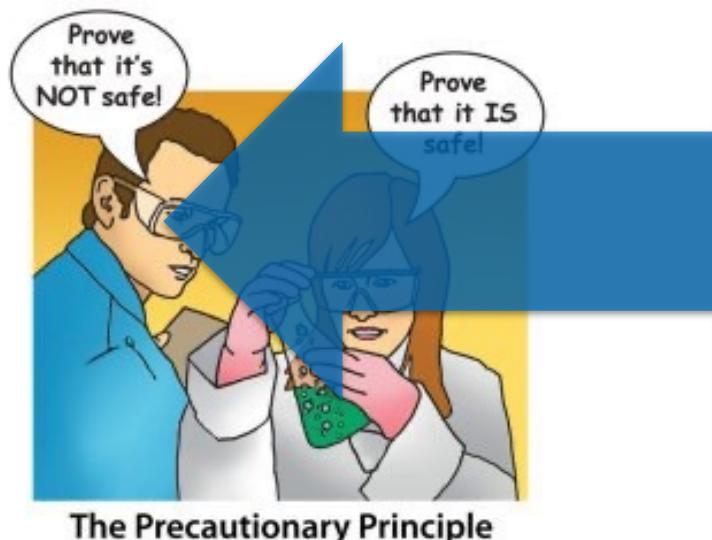
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The doctor of Han  
and John of ABBOTT  
had a meeting...

# Cross-Industry Learning

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## Hospital



ABBOTT

Why?  
What?  
How?

If you think standardization as  
the best that you know today, but  
which is to be improved  
tomorrow; you get somewhere.

# Our business side



- Inducoat B.V. – since 2009
- Exclusive focus on antimicrobial coatings:  
Mould, Bacteria & Algae
- HQ Based in The Netherlands, 4 European factories
- Since 2012 Brinia Coatings - Jack
- Mike Frankhuizen: MD

We accept  
that  
bacteria...



SERIOUS HEALTH  
RISK



MULTI-RESISTANCE  
(NO MEDICINE)



WHAT YOU DON'T  
SEE, CAN BE THERE

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# Which anti-bacterial coating?



Legal standards



Test standards



Practice based evidence



Cross industry learning

# #1 Legal

Dutch approach with global impact

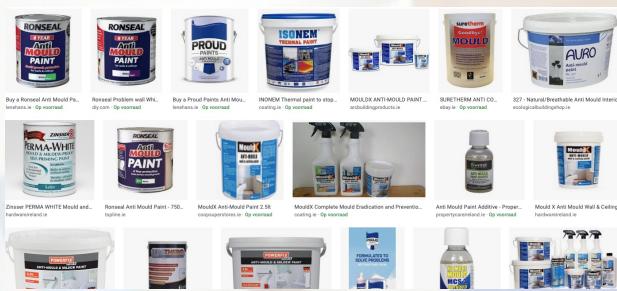


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# Legal...

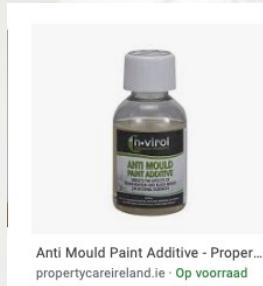


# Trick or treat?



Hygiene paint

Bacteria  
“resistant” paint



Authorized  
bacterial paint



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# Lab evidence

ISO, TNO, Your lab

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# Antimicrobial test methods for coatings

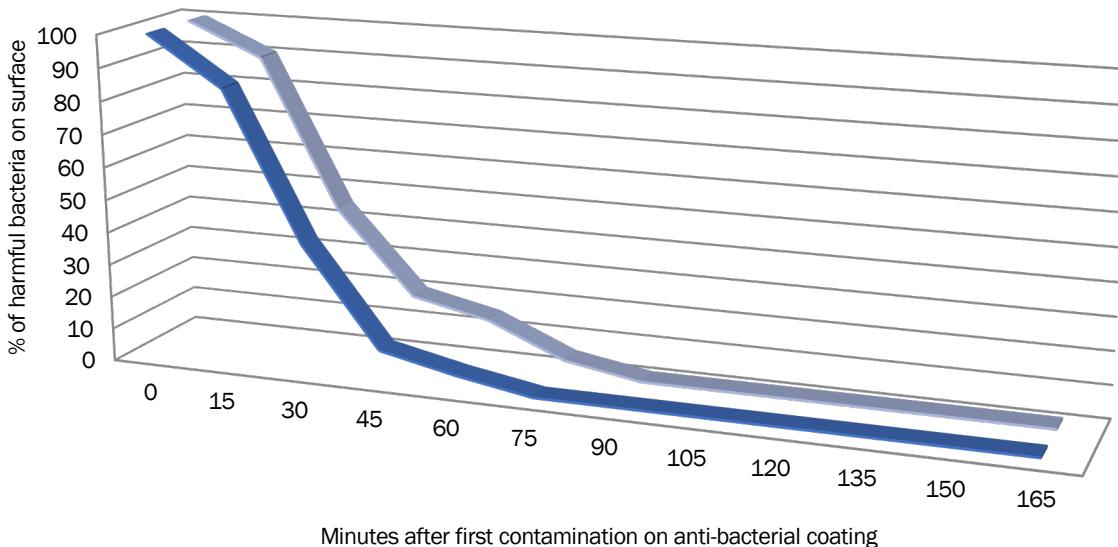
- A coating is currently classified as being antimicrobial if it is capable of preventing the growth of bacteria by approximetaly 99.8%
- There are three major methods:
  - ISO 22 196
  - TNO SEED LAYER TEST
  - PRACTICE BASED TESTING





# ISO 22.196:2011

## ISO 22.196 Anti-bacterial efficacy coating



IMSL

INDUSTRIAL MICROBIOLOGICAL SERVICES LTD

### CERTIFICATE OF ANALYSIS

Inducoat BV  
Spacelab 17A  
3824MK AMERSFOORT  
The Netherlands

CERTIFICATE NO. 1034621.58/11909  
CUSTOMER REF. 8044

Page 1 of 1

SAMPLE DETAILS	DATE RECEIVED	29/01/2016	
INDUCOAT	ORDER NO.		
<hr/>			
METHOD: Determination of Antibacterial Activity using Test Based on MOD ISO 22196	DATE ANALYSED	DATE REPORTED	
	31/01/2016	02/01/2016	
RESULTS (AS CFU CM <sup>2</sup> )	SAMPLE	SPECIES	
	0 hrs	24 hrs	REDUCTION (INITIAL)
	2K WATERBASED PU + 15% CATALYST (CONTROL)	Strep equ	Log 10 %
	2K WATERBASED PU + 15% CATALYST (BIOMASTER)	Strep equ	> 2.94 > 99.89%
	AT300 @ 0.5%)		

Key: NS = Poor survival on control supplied.  
The above data show the difference in the population following contact with the surface of the samples listed for 24 hours at 35°C under a RH of > 95% relative to the initial population.

IMSL MICROBIOLOGICAL SERVICES LTD  
PALE LANE  
HARTELEY WINTNEY  
HANTS RG27 8DH  
UK

MANAGING DIRECTOR  
Peter D Askew

Inducoat Microbiological Services Ltd Registered in England No 3294423 Registered Office The Old Fellow Hall Oxford Road Reading Berks RG1 7NE

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# SEED LAYER TEST

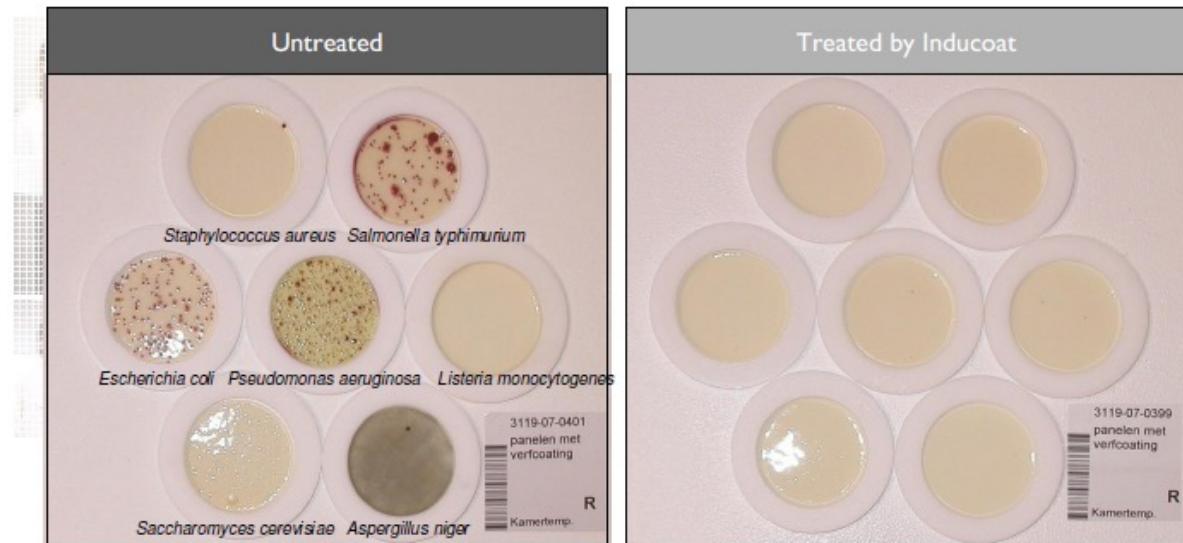
Inducoat® Bacteria  
Photographic proof

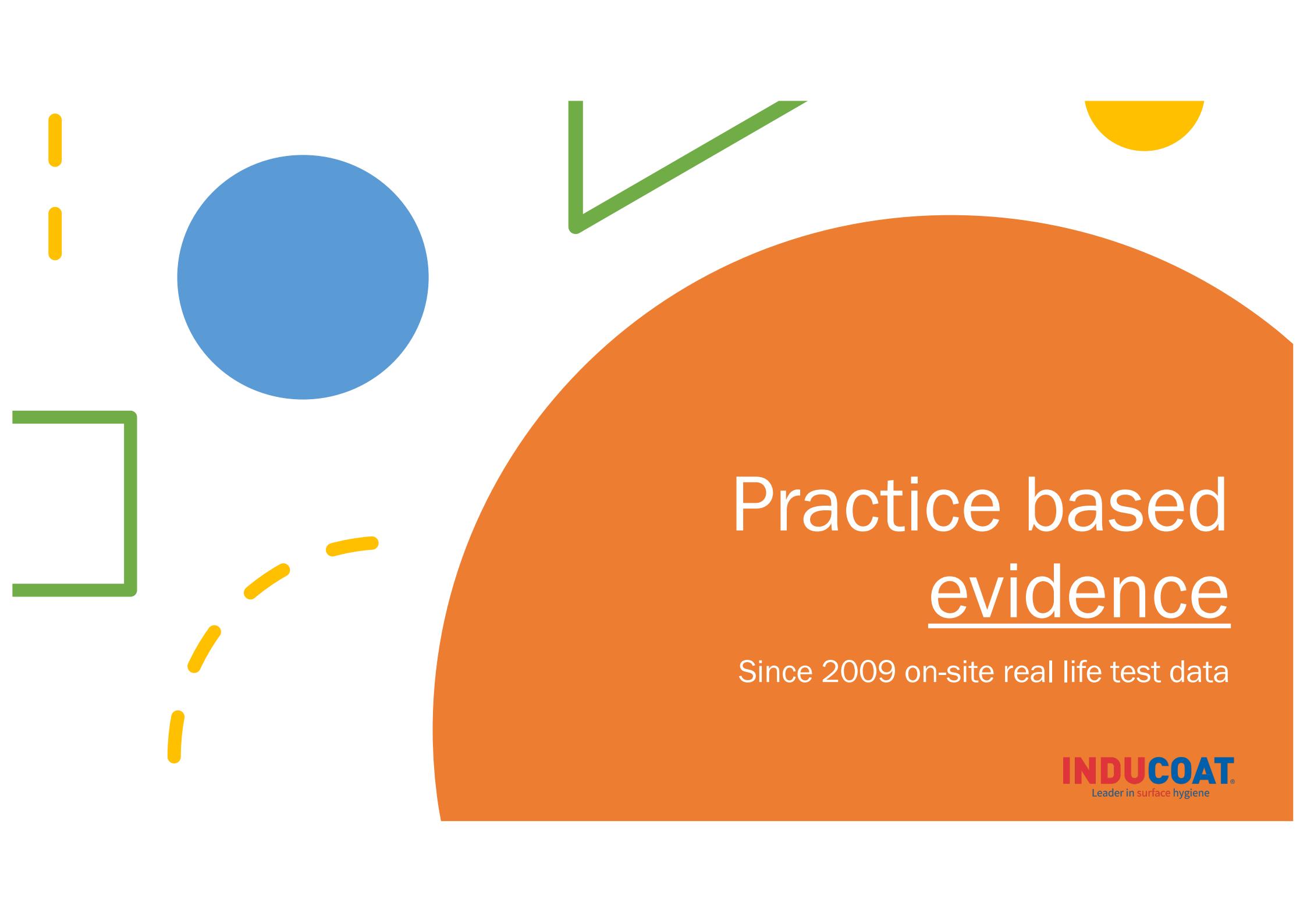
TNO testrapport voor de verschillende eigenschappen van verfcoatings met behulp van de agarplaatmethode						
TNO code	3119-07	3119-07	3119-07	3119-07	3119-07	3119-07
Klant code	30-10	30-20	30-30	30-40	30-50	30-60
Entomologische naam						
E. coli	-	-	-	-	-	-
S. typhimurium	-	-	+++	+++	+++	-
P. aeruginosa	-	-	-	-	-	-
L. monocytogenes	+++	+++	+++	+++	+++	-
E. coli	+++	+++	+++	+++	+++	-
P. aeruginosa	+++	+++	+++	+++	+++	-
L. monocytogenes	+++	+++	+++	+++	+++	-
A. niger	+++	+++	+++	+++	+++	-
S. cerevisiae	+++	+++	+++	+++	+++	-

- = geen groei  
 + = weinig of gedempte groei  
 ++ = sterke groei  
 +++ = volledige groei

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## Photographs TNO Quality of Life





# Practice based evidence

Since 2009 on-site real life test data

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# Hospital – Mr Leo Ummels

Mr Ummels has concluded that the rooms with Inducoat®

“can have a significant impact on higher safety level for the patient”



\*Although these test results are highly confidential, Inducoat® has the unique privilege to refer to Mr Ummels for these results.

- Mr Leo Ummels, infection control specialist, has tested Inducoat in several high care units of the Radboud Hospital in Nijmegen, The Netherlands.
- Mr Ummels has taken 128 swabs of the walls in 6 rooms during 24 months\*
- Mr Ummels has concluded that the rooms with Inducoat “can have a significant impact on higher safety level for the patient”

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# Project Coatings Shine Hygiëne Coatings Quality Improvement Plan

(CIHC-QIP) 2017-2020

07.11.2017

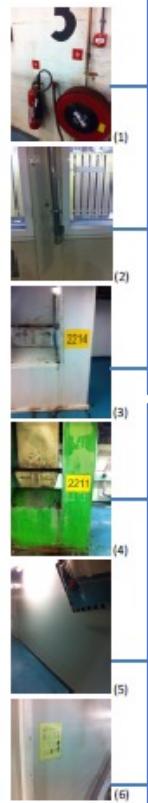
FSQR/QA Cargill/Inducoat/Viterzo/Willemsen

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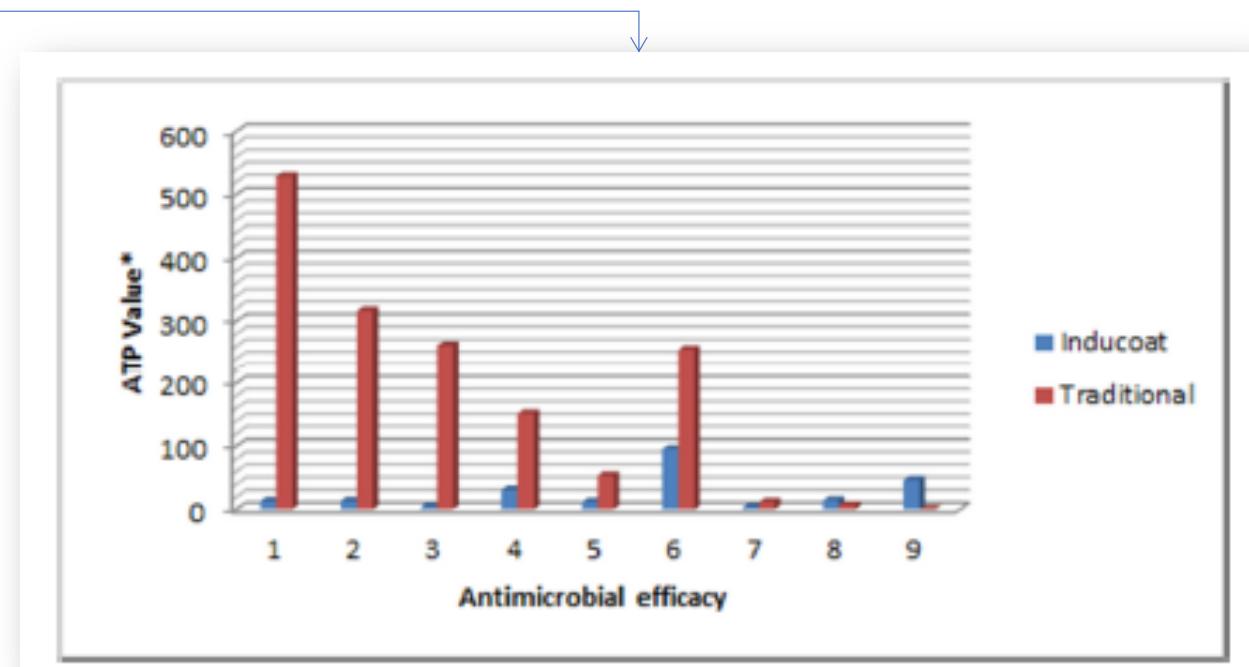


Result:

Hygiëne Coatings Quality Improvement resounding success



In 2011:  
6 initial  
test sites  
–  
pressing,  
packing  
area's



Project Coatings & Shine / Inducoat B.V. / Mike Frankhuizen

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## Example of split run result



Project Coatings & Shine / Inducoat B.V. / Mike Frankhuizen

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# Zwolle ABBOTT Laboratories



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# Risk driven

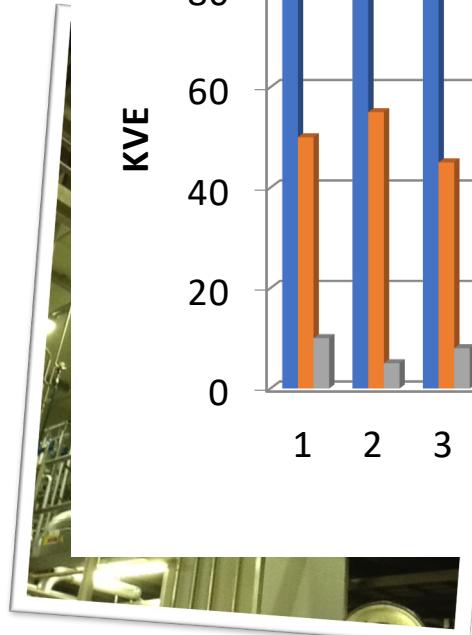
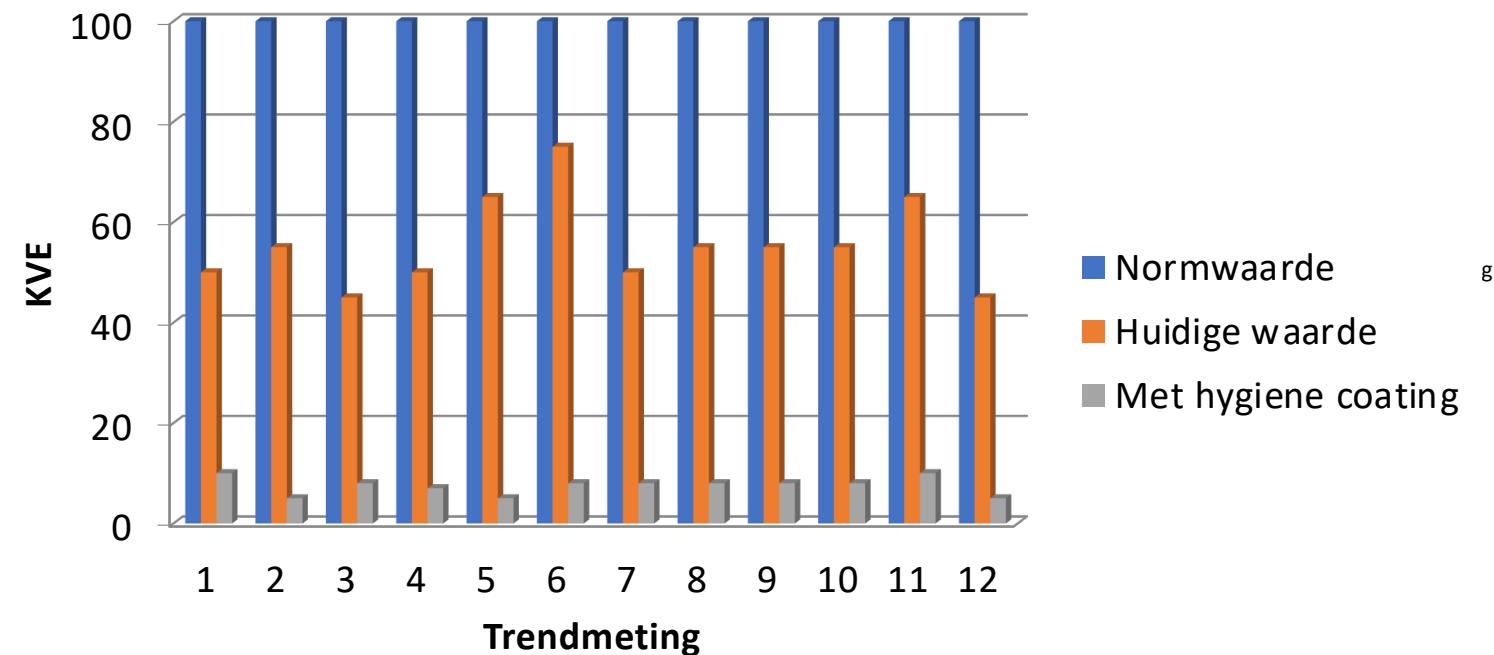


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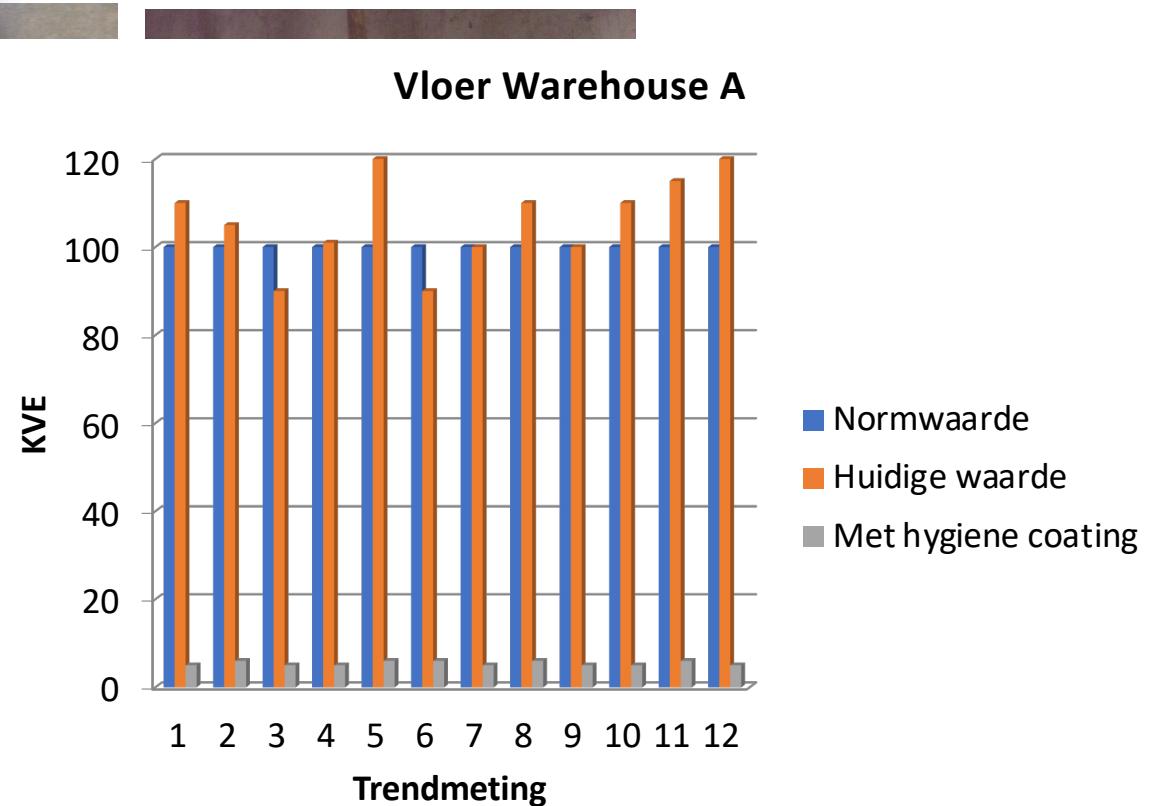
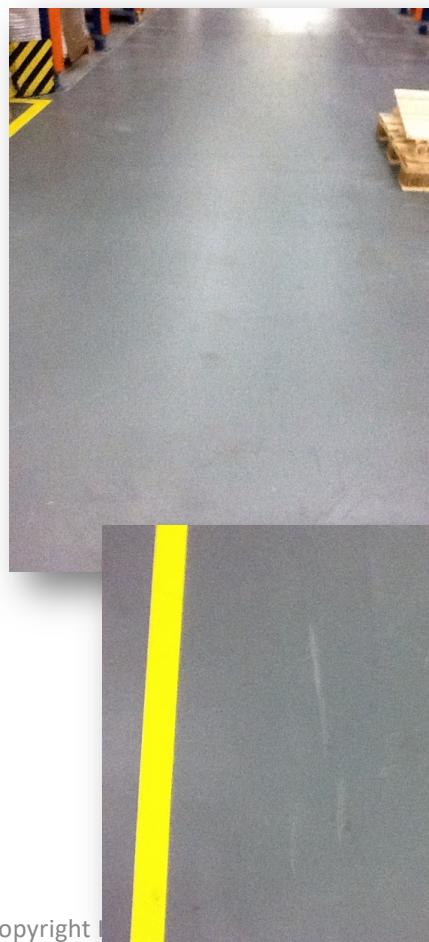
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# Ambient hygiene

Productieruimte A



# Including “Non-critical surfaces”



Copyright

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# Touch point analyses...



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# Multi-disciplinary



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# Interim conclusion: We know why & what



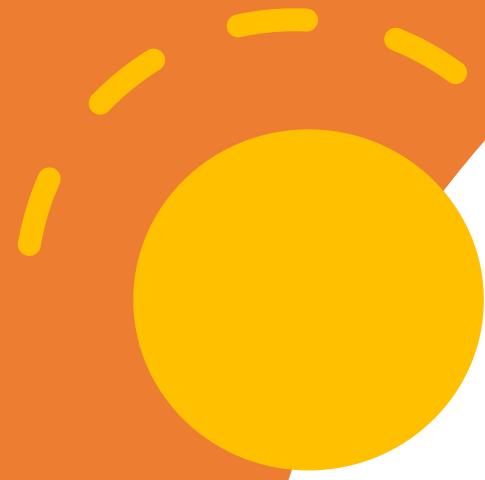
Legal



Lab proof



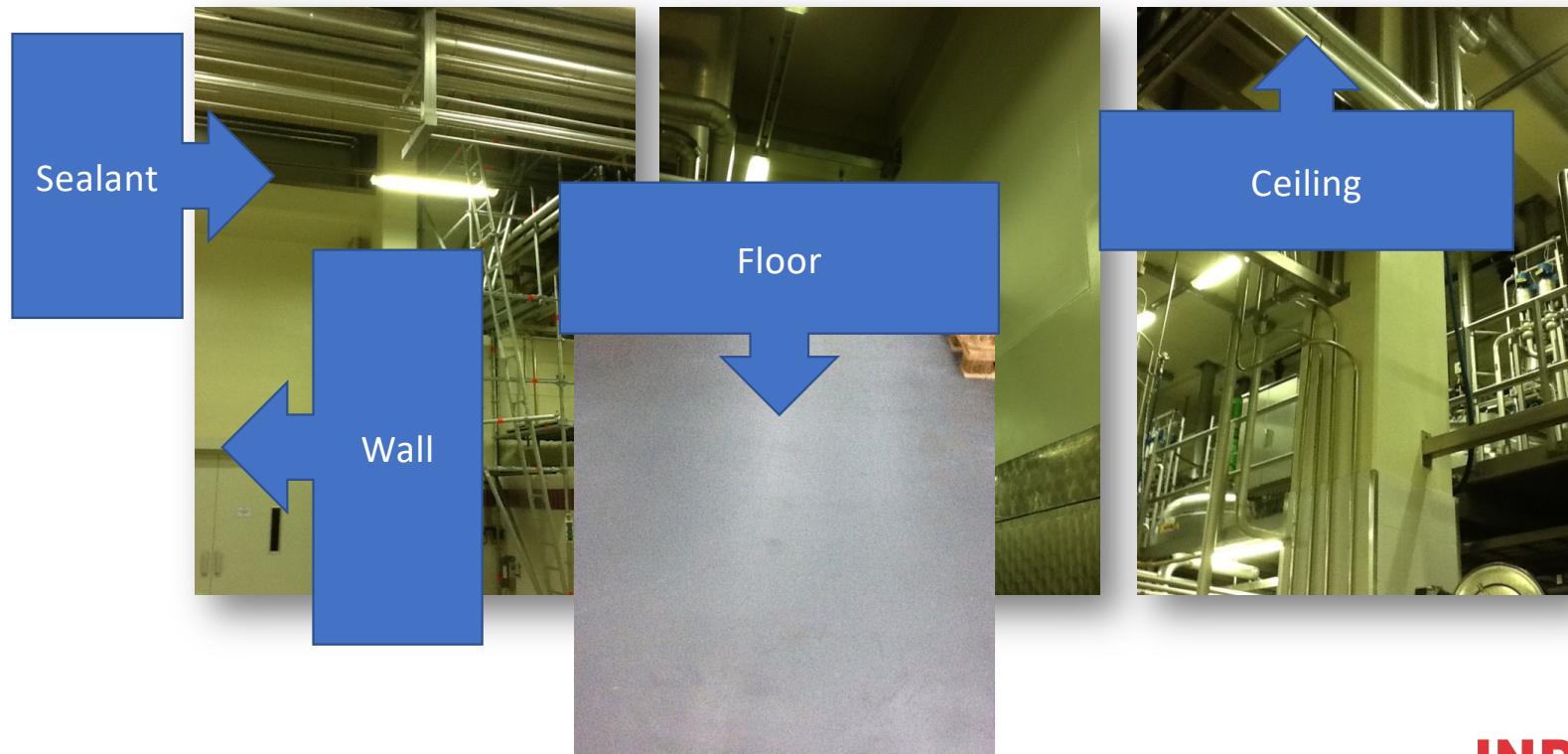
Practice based  
evidence



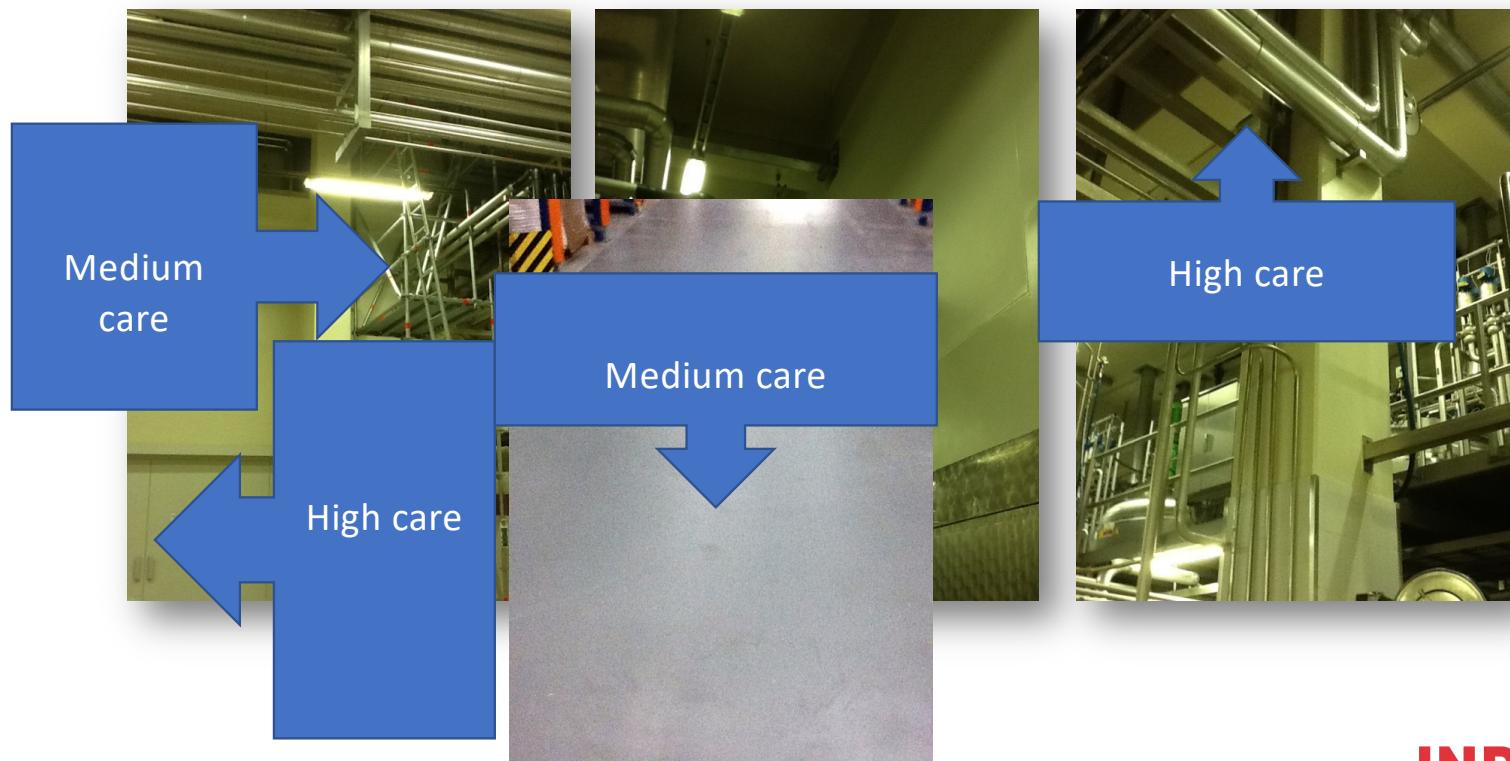
# Practice based choice

The How = Which coating?

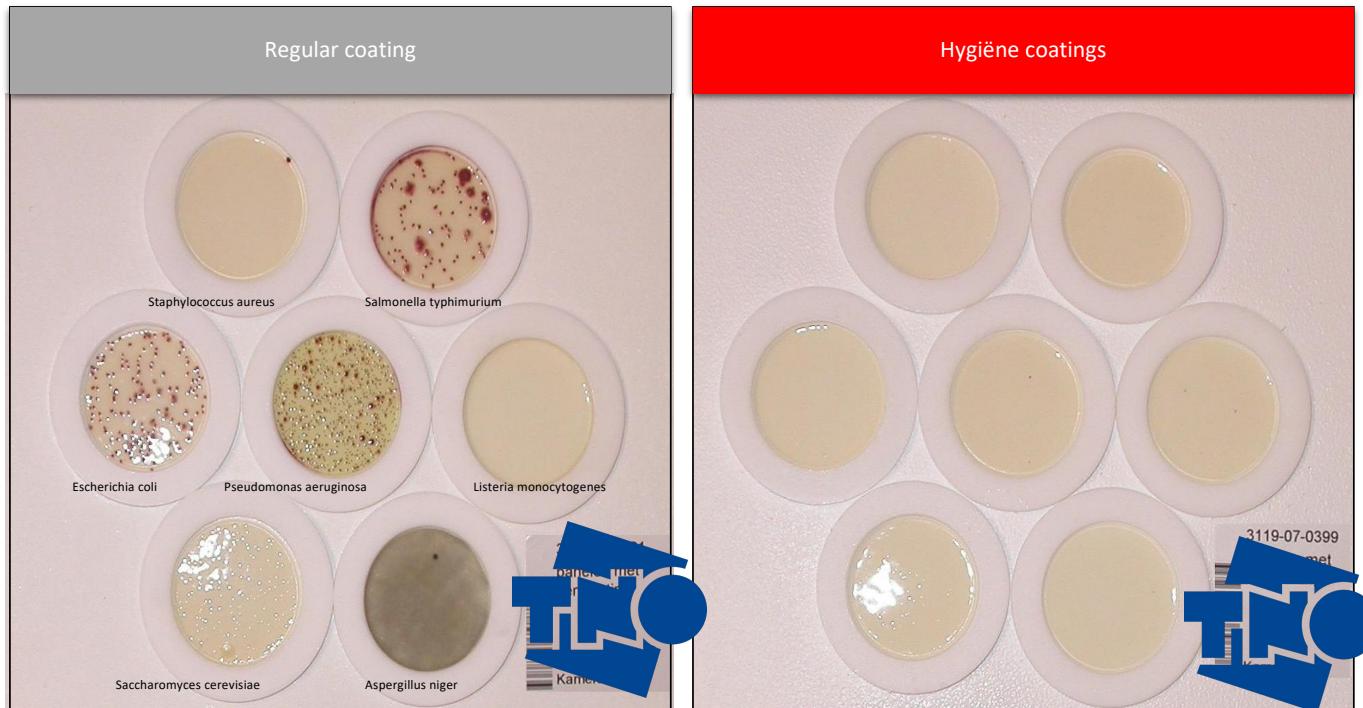
# Step 1: Where is the maintenance?



# Step 2: Classification

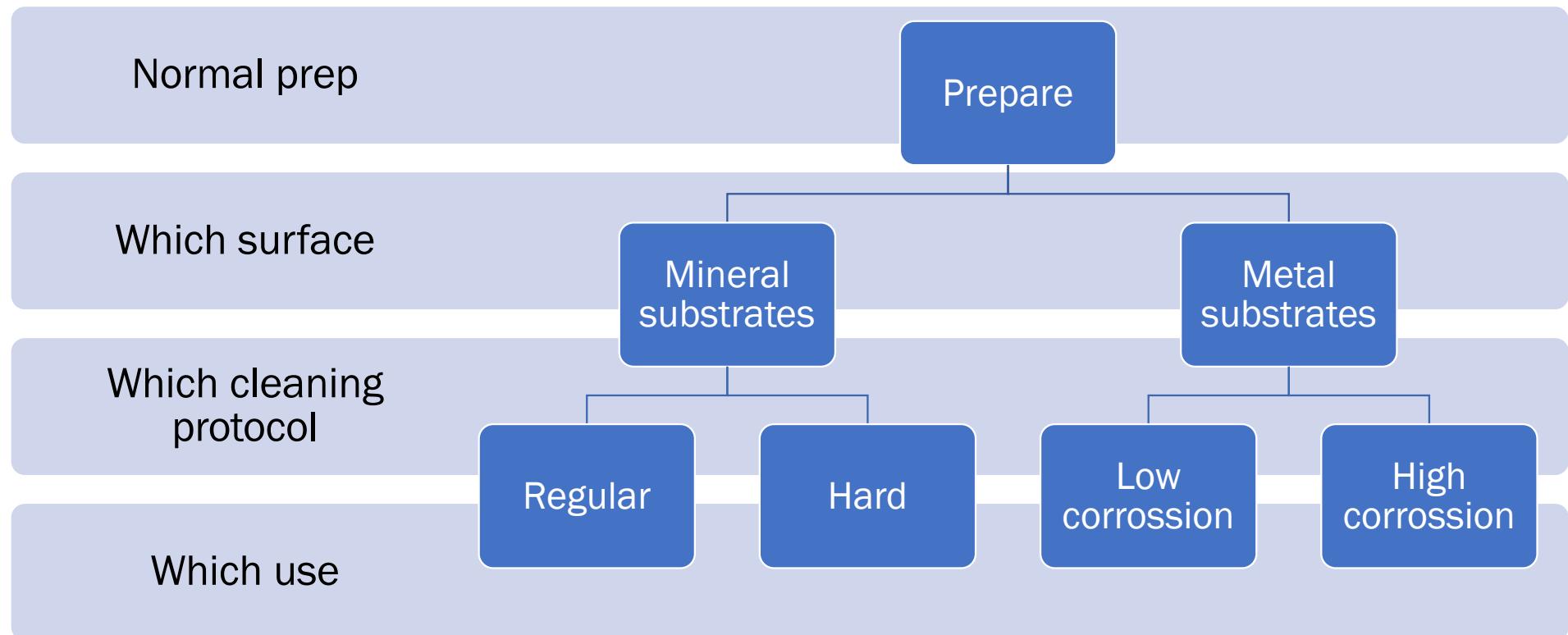


# Step 3: Qualified choice



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# System build-up example



# INDUCOAT®

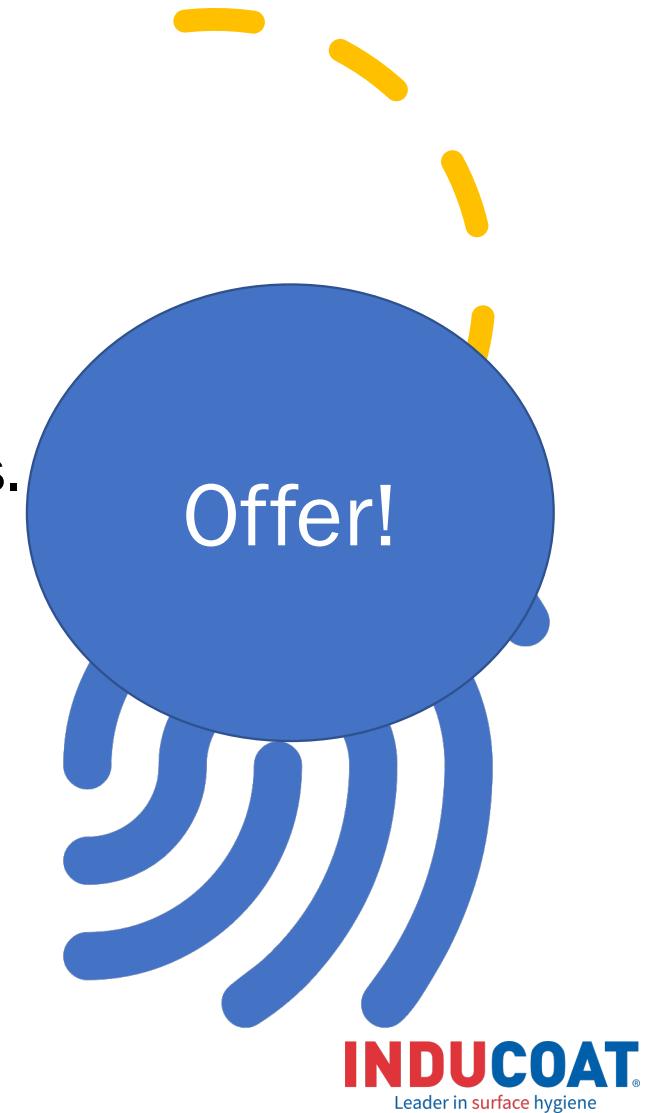
Leader in surface hygiene

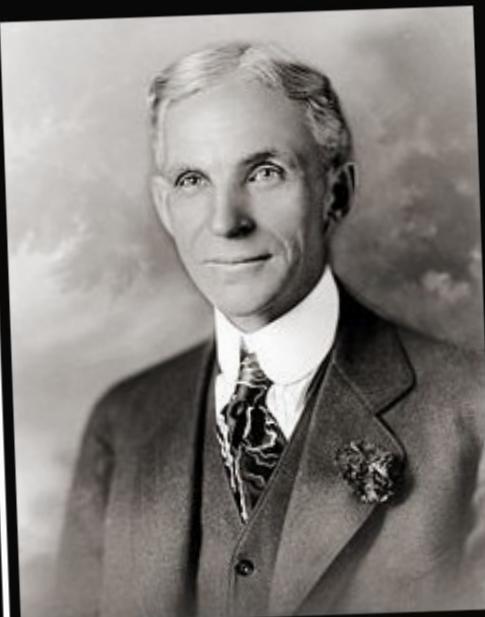
To conclude

Relevant, credible and distinctive

# Ambient hygiene

- You are content with the current situation.
- But you are always trying to find improvements.
- Brinia offer:  
[FREE] Risk Inventarisation and Evaluation(RIE)  
of your site = WHAT + HOW.





Coming together is a beginning, staying together  
is progress, and working together is success.

(Henry Ford)

[izquotes.com](http://izquotes.com)

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Questions?



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# Contact details

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