

PLANNED AND PRIORITIZED DELIVERIES

A
AUTHENTICATION & AUTHORIZATION FOR MERCHANT TEAM
- attach to merchant
- attach to product use
EMERGENCY DELIVERY DATE: 30/11

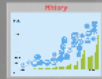
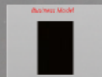
B
REST API ERROR HANDLING
- handle error msg
- error logs
EMERGENCY DELIVERY DATE

C
REST API FOR SALESFORCE
- READ LIVE
with
- find leads
- user news
- gather info
- update merchant
EXPECTED DELIVERY DATE: 30/11

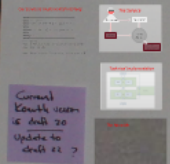
X
CHOP UP THE SYSTEM INFRASTRUCTURE - ISH
Expected Delivery Date: Future

LIMBO FEATURES

BUSINESS



IMPLEMENTATION



PLANNED TO DO LATER

PROBLEM
- [Sticky notes with text]

PRIORITIZED BACKLOG

BUGS
CUSTOMER RESOURCE: SECOND CONTACT LINK
BIG CHALLENGE: END LINKS TO RESEARCH URL
Application plan
- [Sticky notes with text]

SOLUTION



PROBLEM
- [Sticky notes with text]

PROBLEM
- [Sticky notes with text]

PROBLEM
- [Sticky notes with text]

WRITE USE CASE TESTS
DONE: USE CASE TESTS APPROVED BY QA

WRITE UNIT TESTS AND CODE DOCUMENTATION
DONE: ALL TESTS PASS AND CODE IS REVIEWED

DO HAVE DEMO
DONE: ACCEPTED BY STAKEHOLDERS

DO DELIVER
DONE: APPROVED BY LiveOps

DONE!!

Erlang Scales...

Do You?

Erik Stenman



klarna

ONGOING

DONE

[Grid of sticky notes under ONGOING and DONE columns]

friendly board

friendly board

Abstract Talk objectives Target audience

Setup instructions



YouTube

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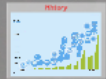
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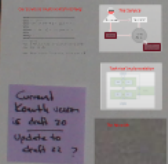
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BUG
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BIG CHALLENGE: END LINK TO ADDRESS: URL

A
Application plan

C
[Sticky notes]

B
[Sticky notes]

C
[Sticky notes]

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[Sticky notes]

C
[Sticky notes]

SOLUTION



[Sticky notes]

[Sticky notes]

[Sticky notes]

[Sticky notes]

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[Sticky notes]

[Sticky notes]

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WRITE USE CASES
DONE: USE CASE TESTS APPROVED BY STAKEHOLDERS

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klarna

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friendly board

friendly board

Abstract
Talk objectives
Target audience

[Sticky notes]



YouTube

Erlang Scales...

Do You?

Erik Stenman



klarna

the right business model



the right technology



the right people



and the right (amount of) process





2005

Etableringsåret!

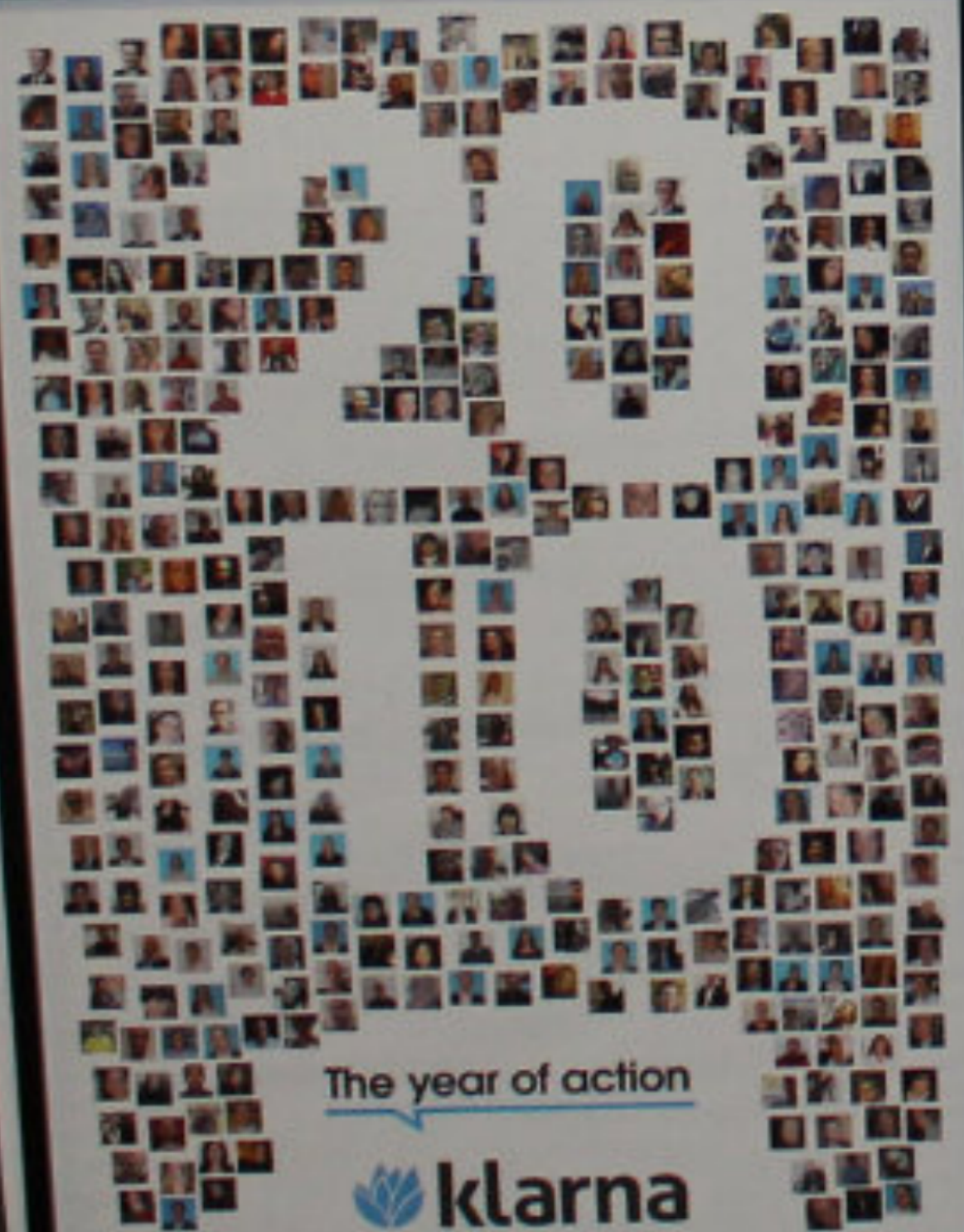


KREDITOR

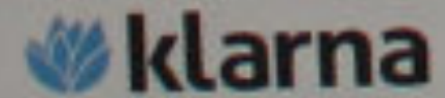
na!



na

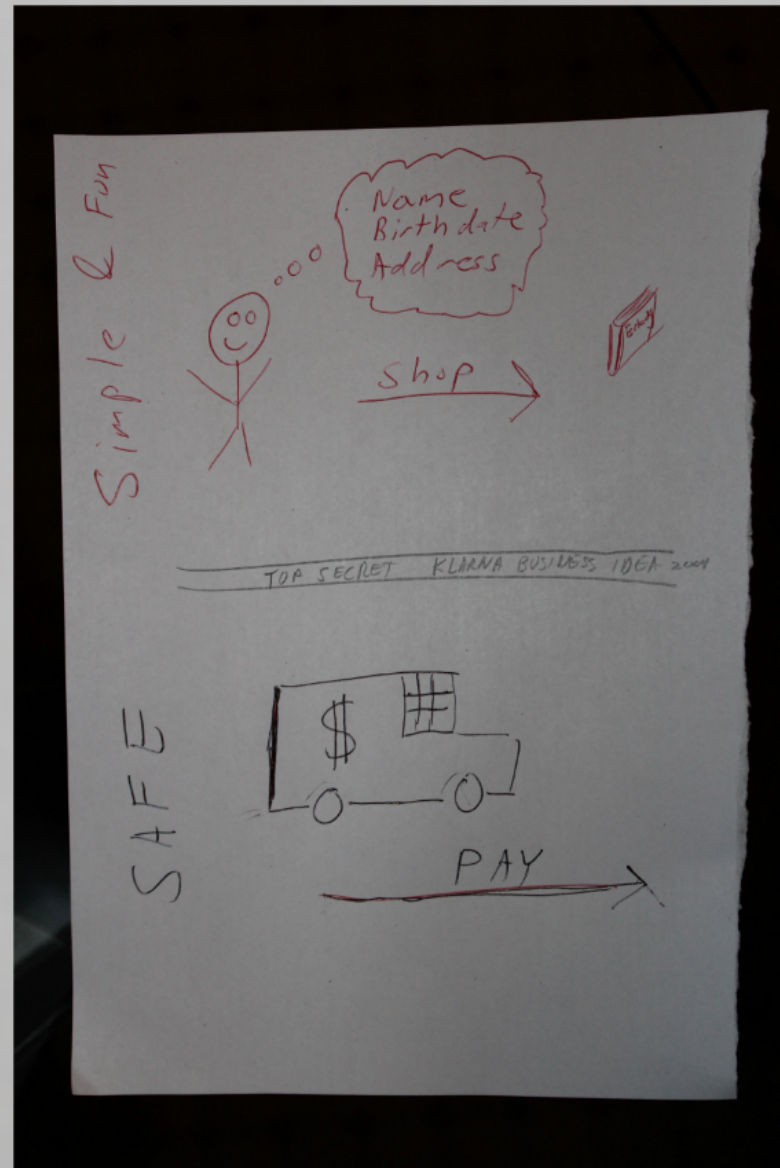


The year of action





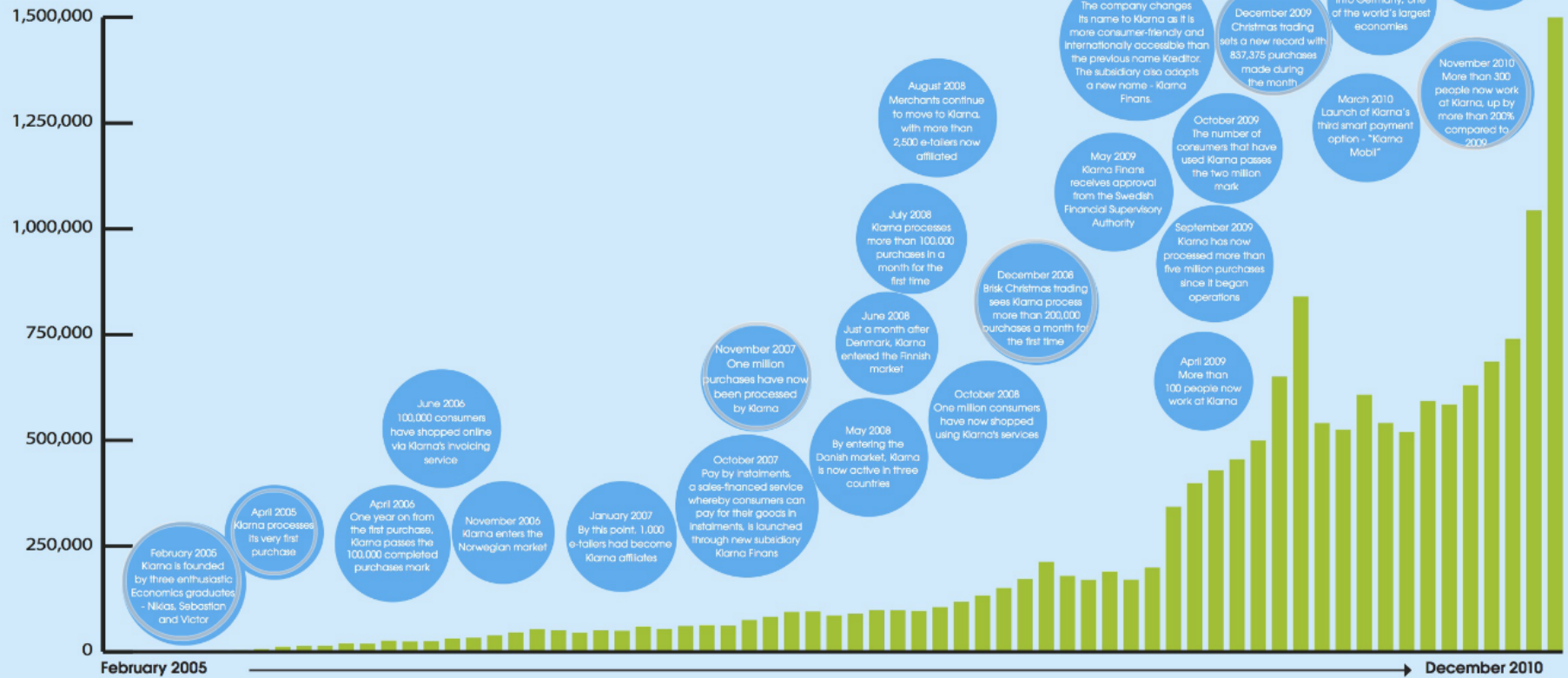
Business Model

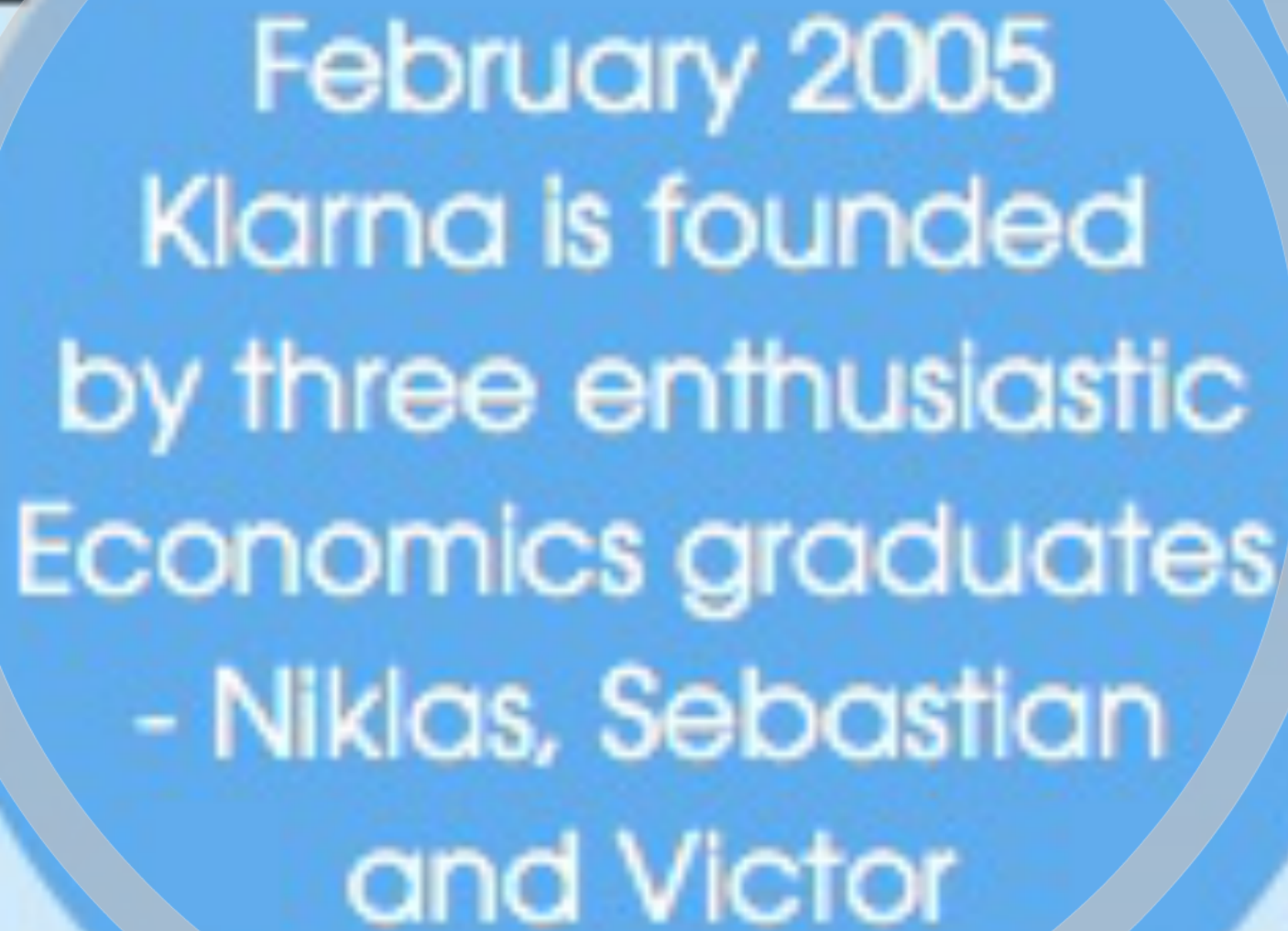


History

History

No. of purchases per month





February 2005
Klarna is founded
by three enthusiastic
Economics graduates
- Niklas, Sebastian
and Victor

Klarna
its
pu

April 2005

Klarna processes
its very first
purchase

ed

November 2007
One million
purchases have now
been processed
by Klarna

December 2008
Brisk Christmas trading
sees Klarna process
more than 200,000
purchases a month for
the first time

December 2009
Christmas trading
sets a new record with
837,375 purchases
made during
the month

May 2010
Sequoia Capital
becomes the second
largest investor in Klarna,
represented in our Board
by Michael Moritz

November 2010
More than 300
people now work
at Klarna, up by
more than 200%
compared to
2009

a's
ent
a

Our service is implemented in Erlang

```
%%%-----  
%%% File   : kred.erl  
%%% Created : 18 Dec 2004 by <mbj@tailf.com>  
%%%  
%%% @author Martin Björklund <mbj@tailf.com>  
%%%  
%%% @end  
%%%-----  
-module(kred).  
-export([new/1, start/0, start_site_apps/0, stop_site_apps/0]).  
-export([start_stat/0]).  
  
-export([version/0, version/1, repo_version/0, repo_branch/0]).
```


the right business model



the right technology



the right people



and the right (amount of) process



the right people



The right people

Bright
Passionate
Get things done



God way to get great programmers.

Nice paradox:

The lack of Erlang programmers makes it easier for us to find great programmers.

There are many great C and Java programmers, I'm sure, but they are hidden by hordes of mediocre programmers.

Programmers who know a functional programming language are often passionate about programming.

Passionate programmers makes Great Programmers™

Some great programmer types

- the prototyper
- the robustifier
- the fixer
- the cleaner
- the optimizer

The Prototyper



The Robustifier



The Fixer



The Cleaner



The Optimizer



The Prototyper

Can build anything in a weekend.



Passionate

Creative

Impatient

Curious

The Robustifier

Writes all the boring but necessary stuff.



Passionate

Careful / Meticulous

Patient

Knowledgeable

The Fixer

Great debugger, knows the runtime.

Passionate

thorough

Patient

Curious / Exploring



The Cleaner

Writes beautiful code. Rewrites smelly code.

Passionate

Aesthetic

Patient

Knowledgeable



The Optimizer

Knows his algorithms and complexity.



Passionate

Mathematical

Experimental

Analytical

Some great programmer types

- the prototyper
- the robustifier
- the fixer
- the cleaner
- the optimizer

The Prototyper

Can build anything in existence!

Personas: Creative

Strengths: Original



The Robustifier

Writes all the boring necessary stuff!

Personas: Careful, Meticulous

Strengths: Thoroughness



The Fixer

Great debugger, finds the errors!

Personas: Analytical

Strengths: Precision



The Cleaner

Writes beautiful code, beautiful code!

Personas: Meticulous

Strengths: Readability



The Optimizer

Makes the app faster and smaller!

Personas: Analytical

Strengths: Efficiency



the right business model



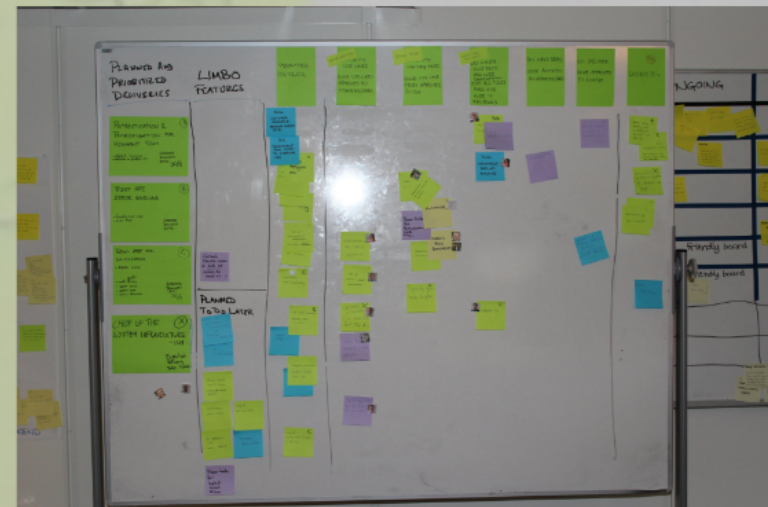
the right technology



the right people



and the right (amount of) process



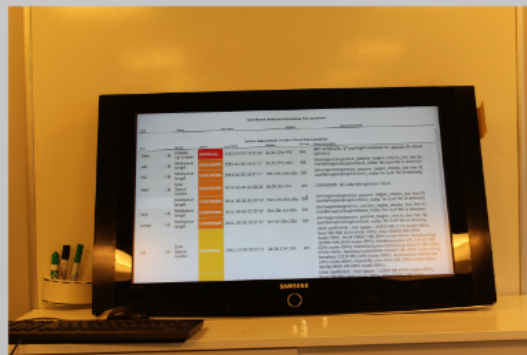
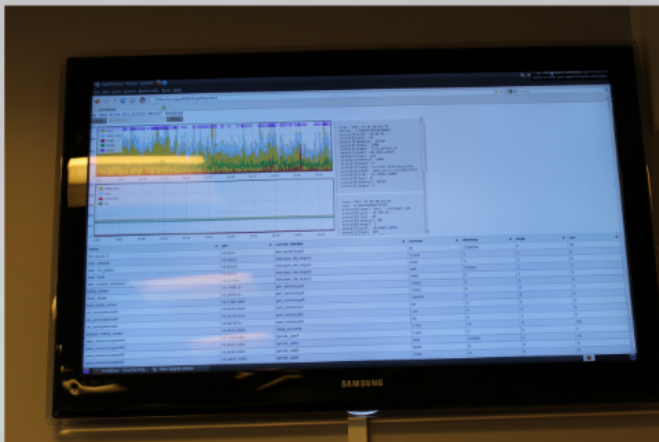
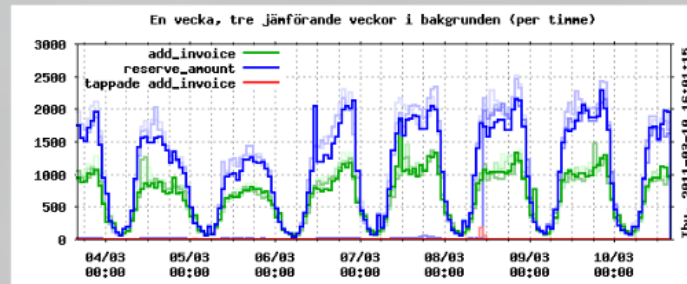
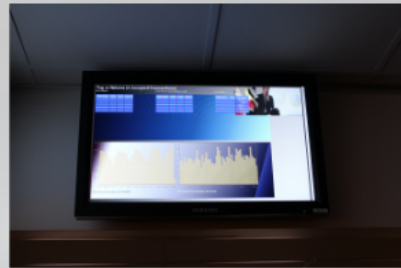


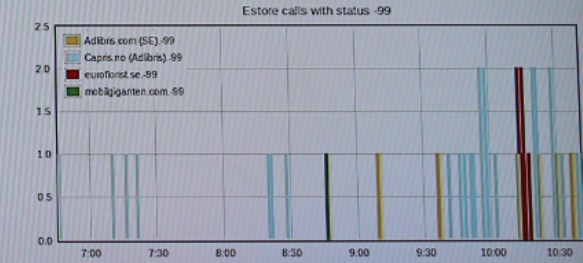
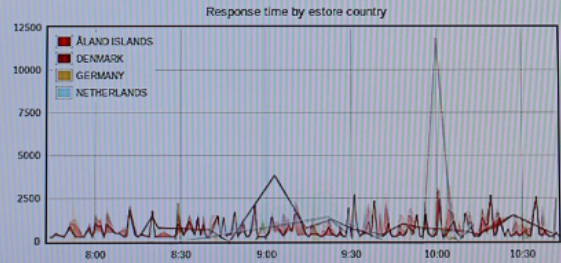
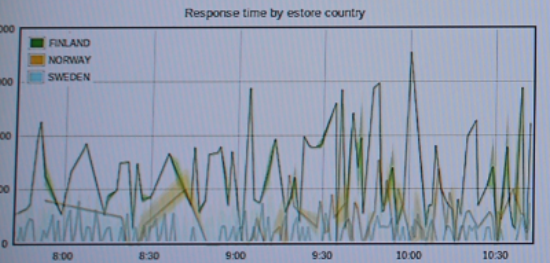
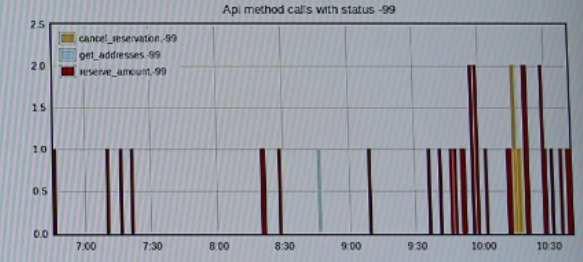
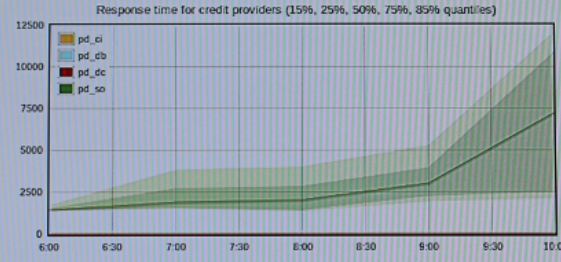
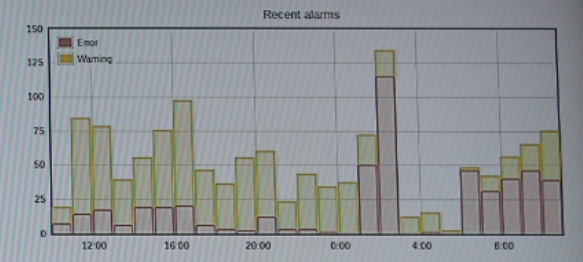
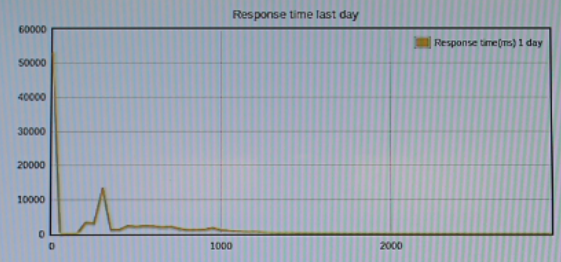
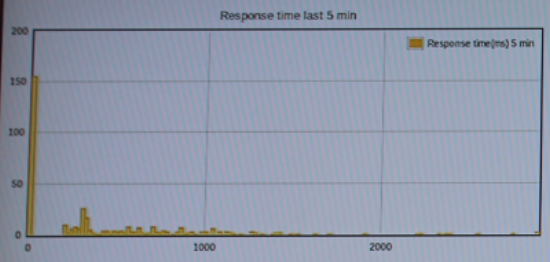


Testing



Monitoring





Top 10 Stores (# Accepted Transactions)

Last Hour

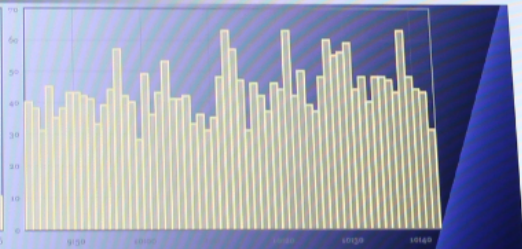
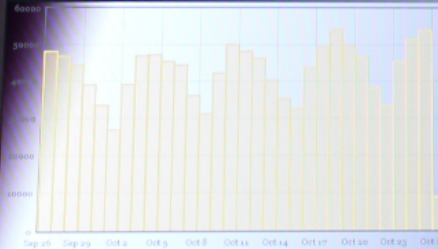
Merchant	EID	#/h	cur/#

Last hour (excluding se,fi)

Merchant	EID	#/h	cur/#

Last Day

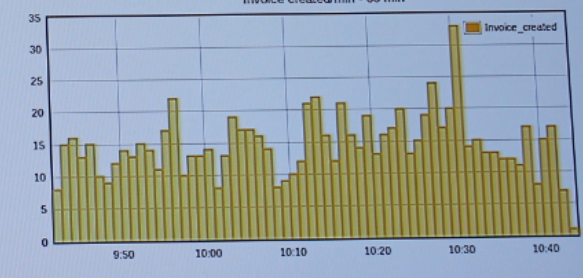
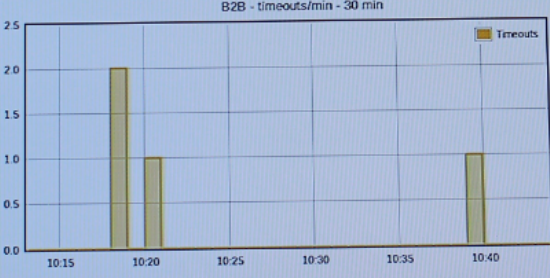
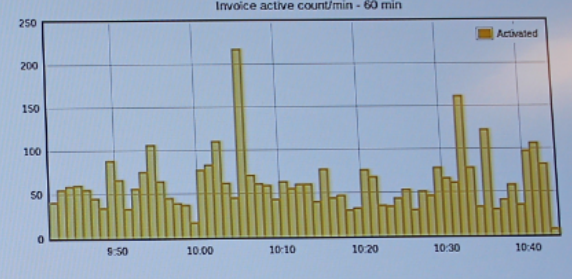
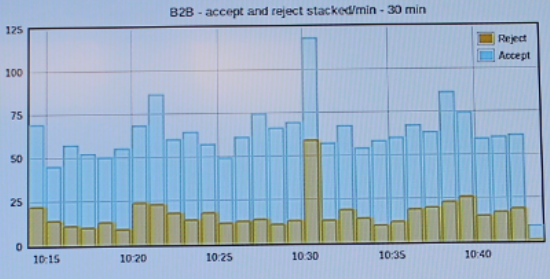
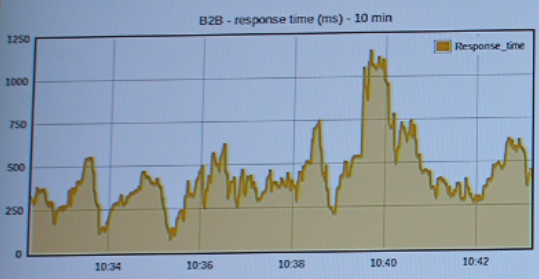
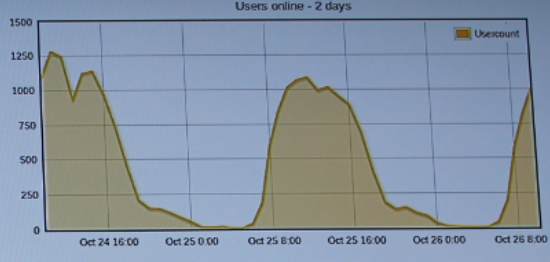
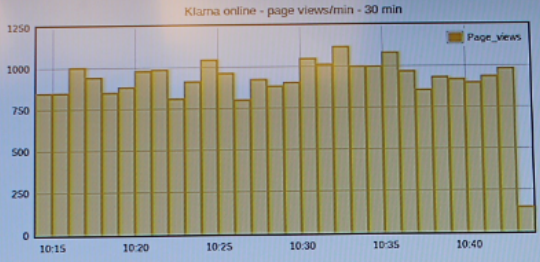
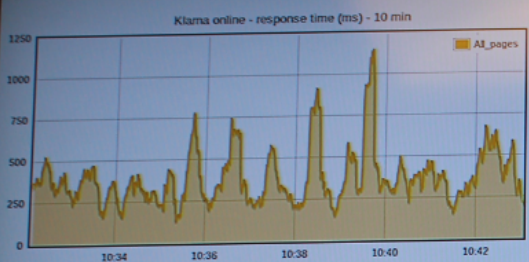
Merchant	EID	#	cur/#



SAMSUNG

IND-TVX

topdisplay2



PHILIPS



Tornio, Finland

Helsinki, Finland

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2011 TerraMetrics
© 2011 Chesapeake
Image IBCAO

©2010 Google

PHILIPS
THE TV SCREEN SHOWS PURCHASES MADE RIGHT NOW THROUGH KARNIA PAYMENT SERVICES

Host Status Details For Host Group 'live-operations'

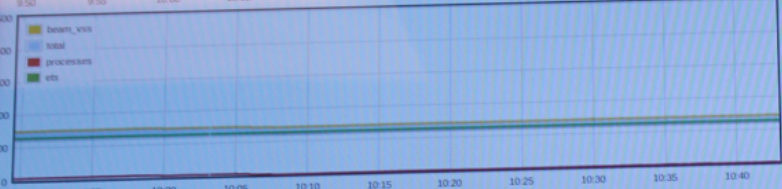
Host	Status	Last Check	Duration	Status Information
------	--------	------------	----------	--------------------

Service Status Details For Host Group 'live-operations'

Host	Service	Status	Last Check	Duration	Attempt	Status Information
------	---------	--------	------------	----------	---------	--------------------

tako	Debian up-to-date	CRITICAL	2011-10-26 10:37:24	5d 4h 17m 47s	6/6	APT CRITICAL: 37 packages available for upgrade (9 critical updates).
aal	Mailqueue length	UNKNOWN	2011-10-26 10:37:17	3d 2h 27m 45s	6/6	/etc/nagios/plugins/run_passive_nagios_checks_live: line 31: /usr/lib/nagios/plugins/check_mailq: No such file or directory
ebi	Mailqueue length	UNKNOWN	2011-10-26 10:37:17	19d 23h 12m 46s	6/6	/etc/nagios/plugins/run_passive_nagios_checks_live: line 31: /usr/lib/nagios/plugins/check_mailq: No such file or directory
tako	Disk Space Inodes	UNKNOWN	2011-10-26 10:39:36	0d 0h 2m 37s	3/6	UNKNOWN: No Data from passive check
	Mailqueue length	UNKNOWN	2011-10-26 10:37:18	26d 17h 45m 46s	6/6	/etc/nagios/plugins/run_passive_nagios_checks_live: line 31: /usr/lib/nagios/plugins/check_mailq: No such file or directory
tara	Mailqueue length	UNKNOWN	2011-10-26 10:37:17	21d 21h 1m 59s	6/6	/etc/nagios/plugins/run_passive_nagios_checks_live: line 31: /usr/lib/nagios/plugins/check_mailq: No such file or directory
unagi	Mailqueue length	UNKNOWN	2011-10-26 10:37:17	11d 0h 26m 28s	6/6	/etc/nagios/plugins/run_passive_nagios_checks_live: line 31: /usr/lib/nagios/plugins/check_mailq: No such file or directory
aal	Disk Space Inodes	WARNING	2011-10-26 10:37:17	3d 2h 17m 14s	6/6	DISK WARNING - free space: / 20432 MB (21% inode=98%); /boot 181 MB (81% inode=99%); /tmp 100605 MB (99% inode=99%); /kred 134007 MB (88% inode=99%); /kred/live/logs 163982 MB (81% inode=99%); /kred/live/system/db 105781 MB (52% inode=99%); /kred/live/system/db/backup 402974 MB (99% inode=99%); /kred/live/system/kfile 546595 MB (36% inode=47%); /kred/tmp 12128 MB (30% inode=99%); /kred/pcache 68896 MB (38% inode=80%); /home/ftp_user 9925 MB (98% inode=99%); /srv/ftp 9928 MB (98% inode=99%); DISK WARNING - free space: / 13909 MB (29% inode=96%); /boot 188 MB (84% inode=99%); /tmp 100507 MB (99%

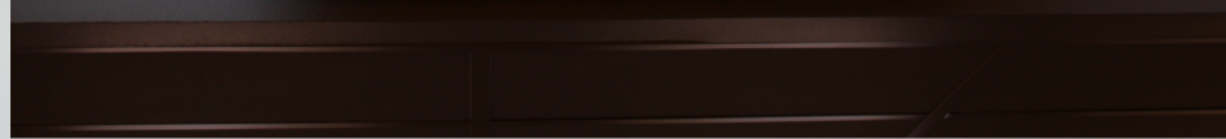
SAMSUNG



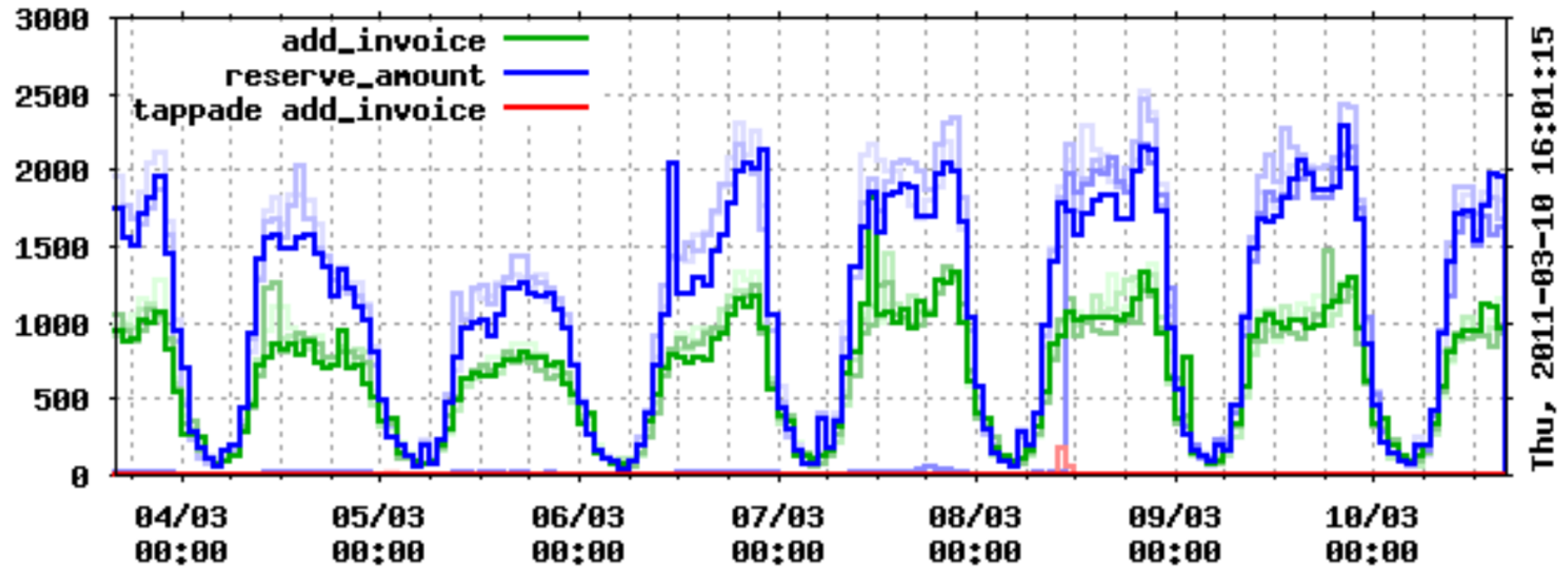
```
time: 2011-10-26 08:43:19
kernel: 2.692071300.039404
procs[0][pid]: <0.25.0>
procs[0][cpu]: 59
procs[0][memory]: 21160
procs[0][msg]: 1368
procs[0][name]: file_server_2
procs[1][pid]: <0.4318.1050>
procs[1][cpu]: 115
procs[1][memory]: 1088
procs[1][msg]: 0
procs[1][name]: account_linking_worker
procs[2][name]: yaws_server.acceptor0/2
procs[2][pid]: <0.17064.1080>
procs[2][cpu]: 0
procs[2][memory]: 36116
procs[2][msg]: 0
```

```
time: 2011-10-26 08:42:42
user: 6.09755082157532
procs[0][name]: dets - customer_sub
procs[0][pid]: <0.767.0>
procs[0][cpu]: 20
procs[0][memory]: 88
procs[0][msg]: 2
procs[1][pid]: <0.4318.1050>
procs[1][cpu]: 207
```

name	pid	current_function	memory	dmemory	msgs	cpu
file_server_2	<0.25.0>	gen_server.loop/6	41	12098290	0	48
dets - etrans4	<0.439.0>	dets.open_file_loop/2/2	12133	0	0	0
dets - inv_pclass	<0.824.0>	dets.open_file_loop/2/2	2926	0	0	0
dets - tnote	<0.933.0>	dets.open_file_loop/2/2	436	273025	1	1
dets - invoice_archive31	<0.1133.0>	dets.open_file_loop/2/2	2866	0	0	0
policy_server	<0.27095.1>	gen_server.loop/6	12053	0	0	0
fraud_server	<0.29250.1>	gen_server.loop/6	24561	0	0	0
kula_cache_server	<0.17854.188>	gen_server.loop/6	436354	0	0	0
ssl_connection:init/1	<0.12157.225>	prim_inetrecV/3	66	0	1	0
ssl_connection:init/1	<0.32732.671>	prim_inetrecV/3	172	0	1	0
ssl_connection:init/1	<0.562.672>	prim_inetrecV/3	66	0	1	0
ssl_connection:init/1	<0.4318.1050>	string_ext:in/3	1759	12	0	135
account_linking_worker	<0.7208.1080>	gen_do_call/4	7450	0	0	0
yaws_server.acceptor0/2	<0.8632.1080>	gen_do_call/4	949	414818	0	19
yaws_server.acceptor0/2	<0.9225.1080>	gen_do_call/4	8036	0	0	0
yaws_server.acceptor0/2	<0.19937.1080>	gen_do_call/4	7450	0	0	0

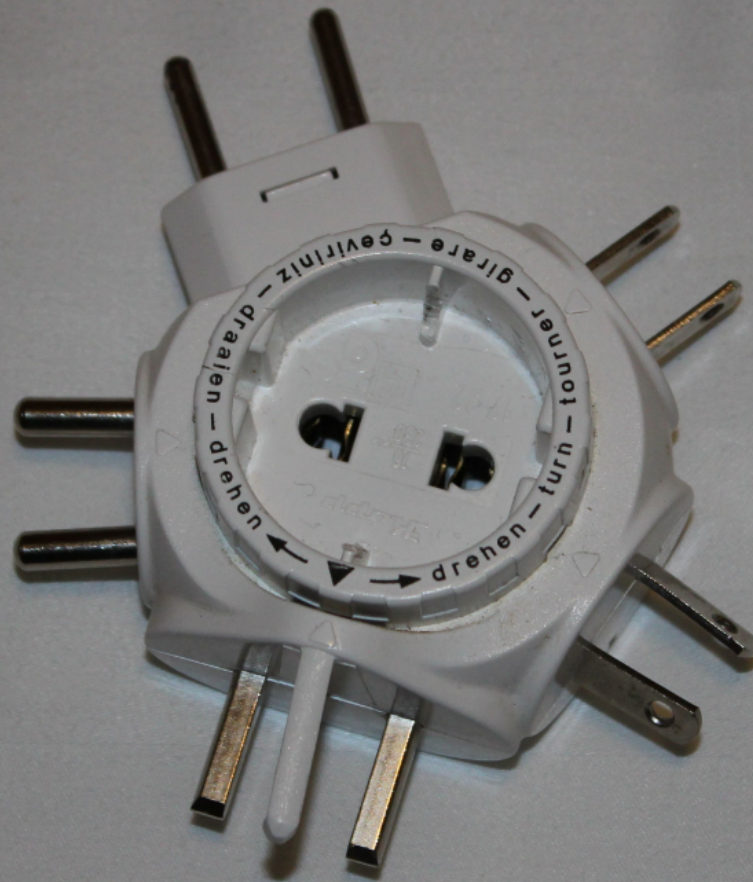


En vecka, tre jämförande veckor i bakgrunden (per timme)



Thu, 2011-03-10 16:01:15

The Monolith



the right business model



the right technology



the right people



and the right (amount of) process





- let testing slip
- buy without enough research
- fall for not invented here
- live without interfaces



- scale the process
- have proper testing
- have processes for:
 - upgrade
 - monitoring
 - escalation

DON'T LOSE YOUR PASSION



QUESTIONS?



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- authorize in public view
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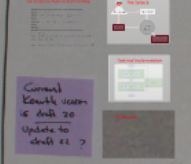
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CHOP UP THE SYSTEM INFRASTRUCTURE - ISH
Expected Delivery Date: Future

LIMBO FEATURES

BUSINESS



IMPLEMENTATION



Current Klarna users is about 20
Update to about 22 >

PLANNED TO DO LATER

PROBLEM
- [Sticky notes with handwritten notes]

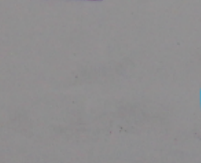
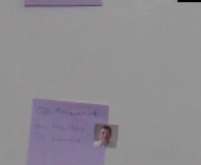
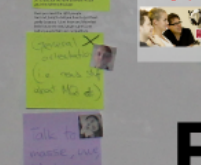
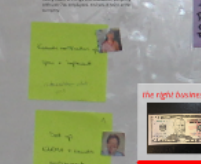
PRIORITIZED BACKLOG

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Application plan
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PROBLEM
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DONE: ACCEPTED BY STAKEHOLDERS

DO DELIVER
DONE: APPROVED BY LiveOps

DONE!!



Erlang Scales...

Do You?

Erik Stenman



klarna

ONGOING

DONE

[Grid of sticky notes under ONGOING and DONE columns]

friendly board

friendly board

Abstract Talk objectives Target audience:

Setup instructions
- [Sticky notes with handwritten notes]



YouTube