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Optional background music low volume: The Byrds - Turn turn turn

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Quarterly Upgrades: From Project to Routine CNE

UGM179 CNE 11:30 AM 12:10 PM

Audience: Newly installed

Location: Epic Trek

This presentation takes you on a journey through the four seasons. During this trip, the challenges, resistance, and roadblocks of upgrade are discussed - as is an approach to rollout, testing, and training that can make the 3-month upgrade cycle feel routine. Hear experiences from end users, IT, and the Epic team that substantiate the decisions made.

Learning Objectives: Outline how to roll out a quarterly upgrade process smoothly. Discuss how to deal with resistance to a quarterly upgrade process. Explain methods for managing short quarterly upgrade timelines.

Elles Kruid-de Bock, Projectlead and Ariane van Wamel, CNIO, Spaarne Gasthuis

Disclosures

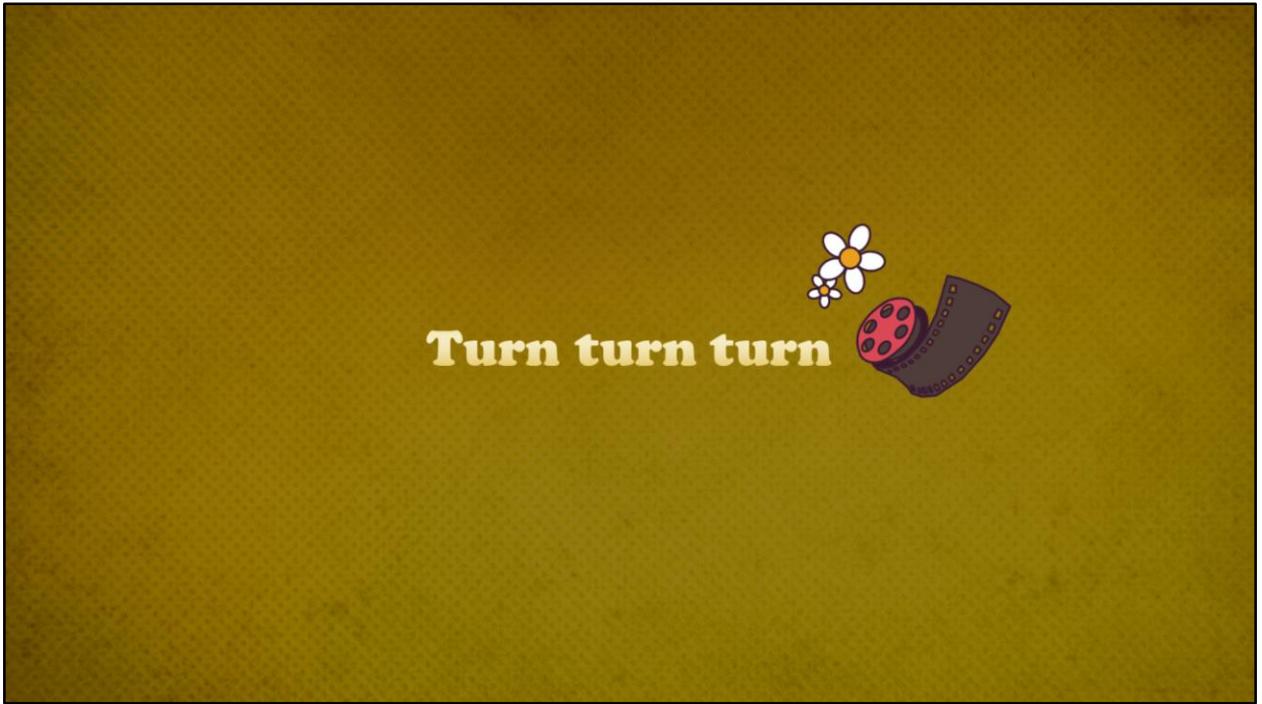
The following speakers have no relevant financial relationships to disclose:

- ✿ Elles Kruid-de Bock
- ✿ Ariane van Wamel-Beukers



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Just a minute and a half appetizer to start with!

Click on movie illustration to start YouTube clip
<https://youtu.be/pj9or05BRXE>

Turn off Autoplay next video, prepare full screen, click away pop-ups, leave on full screen and use ALT+TAB to switch from PowerPoint to Internet/YouTube.



Hello everybody.
Welcome!
Thank you all for coming to his presentation!

Kaleidoscopic trip



Don't worry, I'm not going to talk about Kaleidoscope, the Epic ophthalmology application.

A kaleidoscope is the symbol of mirroring or copying one original image. So one upgrade scenario or time-path that we copy to every new seasonal upgrade. And then it is a matter of turning the cycle around and around and around.

Introduction



At first, let's introduce ourselves!

This is Ariane van Wamel, she is our CNIO in the Spaarne Gasthuis.

My name is Elles Kruid I am a project manager at the Spaarne Gasthuis.

Raise hands



What about you? Let's raise hands.
Who are from the USA?
Who are from outside the USA?

Three locations

Spaarne **S** Gasthuis

Spaarne **S** Gasthuis

Spaarne **S** Gasthuis

- ✿ Midsize regional hospital
- ✿ 800 beds & 4,000 employees
- ✿ 4 ambulatory clinics
- ✿ Inpatient healthcare

Let me tell you some details about our hospital, Spaarne Gasthuis.

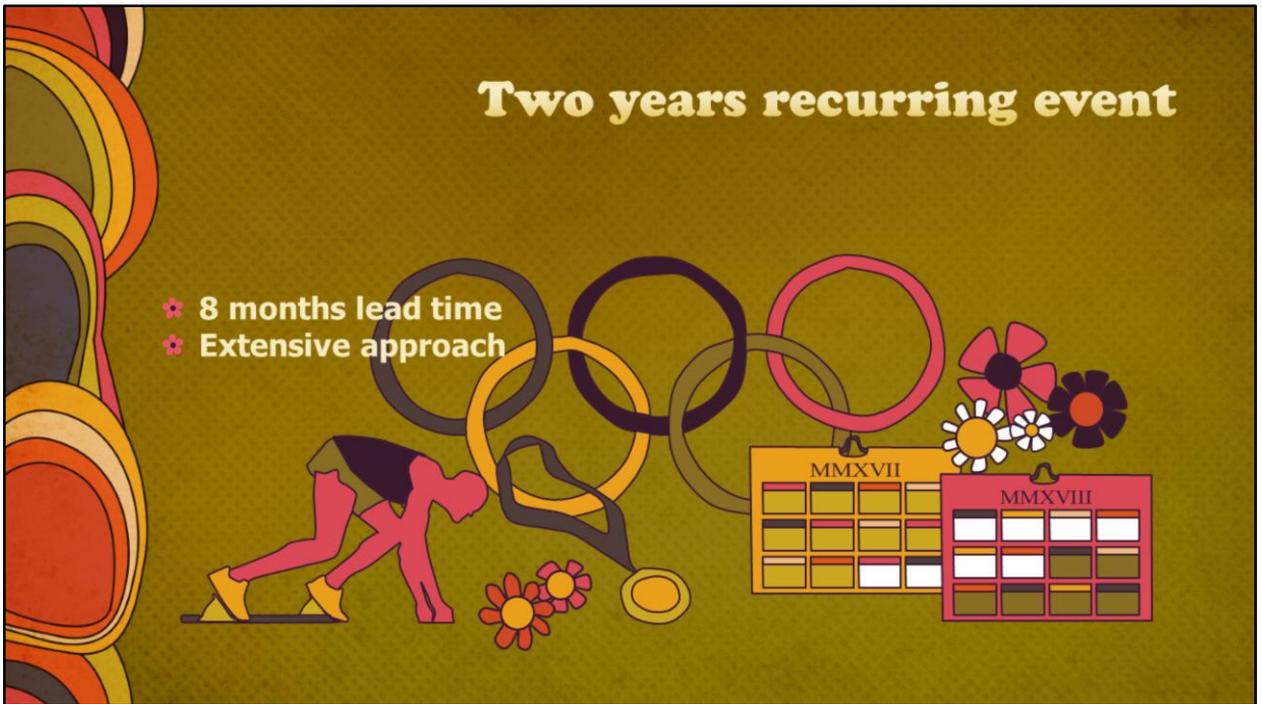
The hospital is a midsize regional hospital.
 We have 4 ambulatory clinics and
 3 major locations
 where also inpatient health take place.
 There are about 4,000 employees
 and we have 800 beds.



The goal of the hospital is
to offer the best care in the region.
(map shows Wisconsin state versus the Netherlands)

And last but not least:
we were the first hospital outside USA who installed Epic!

Now let me tell you something about the quarterly Epic update in our hospital.
Epic has changed the upgrade strategy to a quarterly upgrade.



But before that we performed a yearly or 2 yearly upgrade.
Compare it with the Olympics summer and winter edition.

The lead time of those projects was long and took 6 to 8 months (see calendars).

This asked an extensive approach.
The teams needed a lot of time to read, test and train the release notes.



There was a high workload on the application teams.
We worked with all the application teams on the upgrade and there was no time for other projects.

The impact on the end-users and their work process was huge.
The super users worked extra hours to provide support.
And sometimes we had to reduce the production.



We started with the first Epic quarterly upgrade in August last year and had the go-live on the 12th of November.

We had a short lead time of 10 weeks (the first time).

With a team of only 10 people.

The impact on the application teams was less.

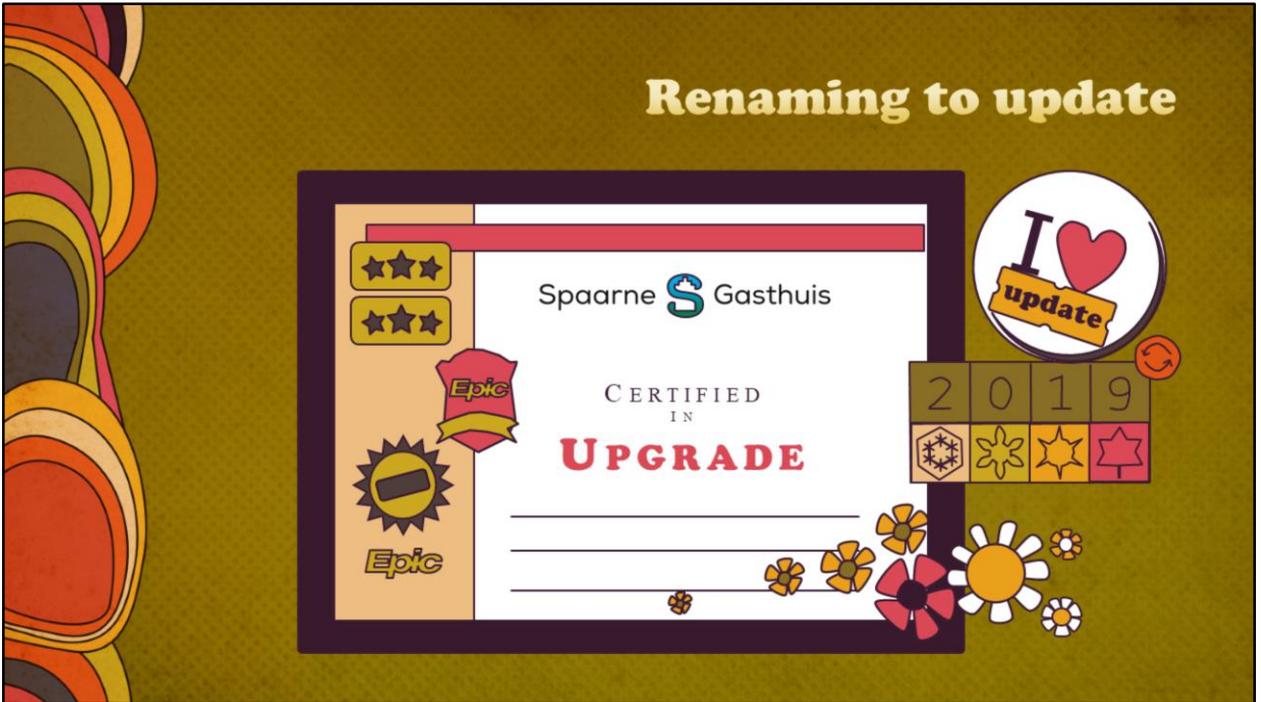
And also the impact on the organization was low (as shown on the punching bag).

Happy end-users



It felt like a normal downtime with SU's.
Especially the end-users where very happy with it.
What was our approach?
How did we do this?

Renaming to update



The first thing we did was renaming the upgrade to Epic update.
So that the fear what people feel hearing the word upgrade didn't came up.

End-users experience an upgrade as a major and impactful task with high work load.

Updates are associated with much smaller events with minimum personal effort.
We also linked the updates to the seasons (and logos).



After that we started with DUB teams, dedicated update builders.

One representative from every application.

Next to these people there was a technical man and from the IT involved and the project lead.

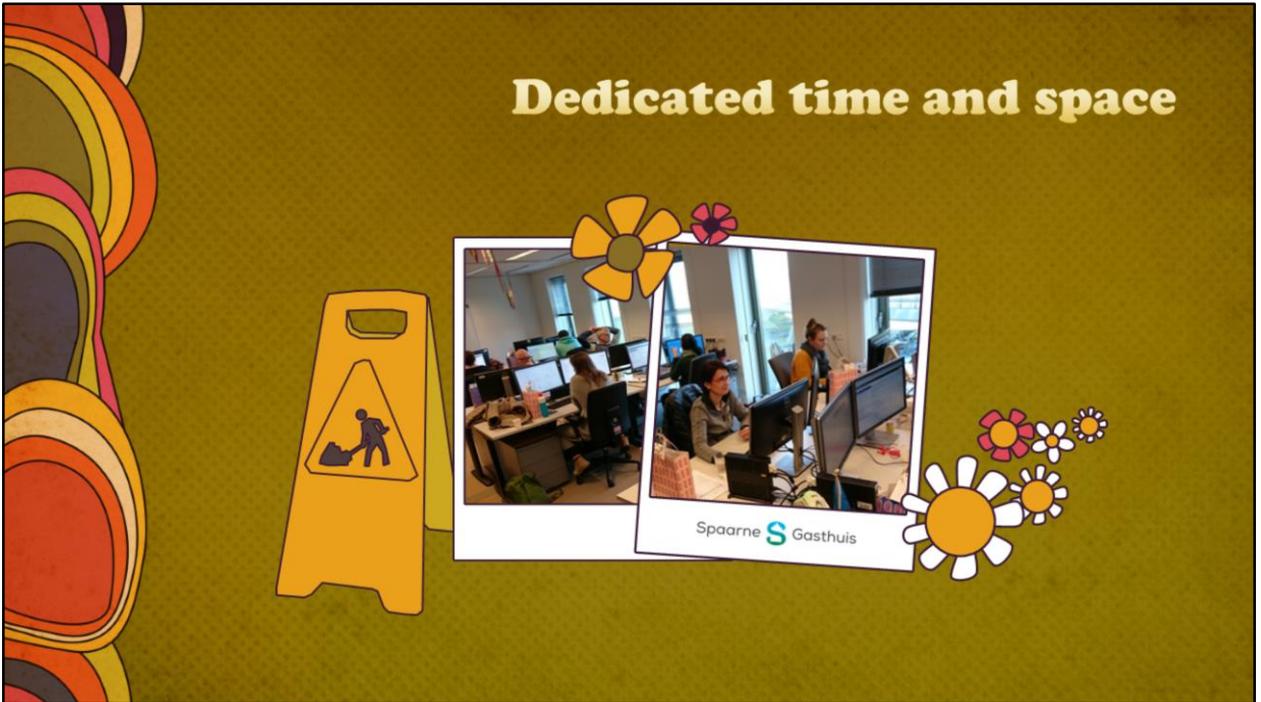
This was a group of 10 people.

Next to this group we created a read team.

This was also one representative from the application who read, just like the DUB-ber.

All the release notes so that they could consult each other about what to do with the release note.

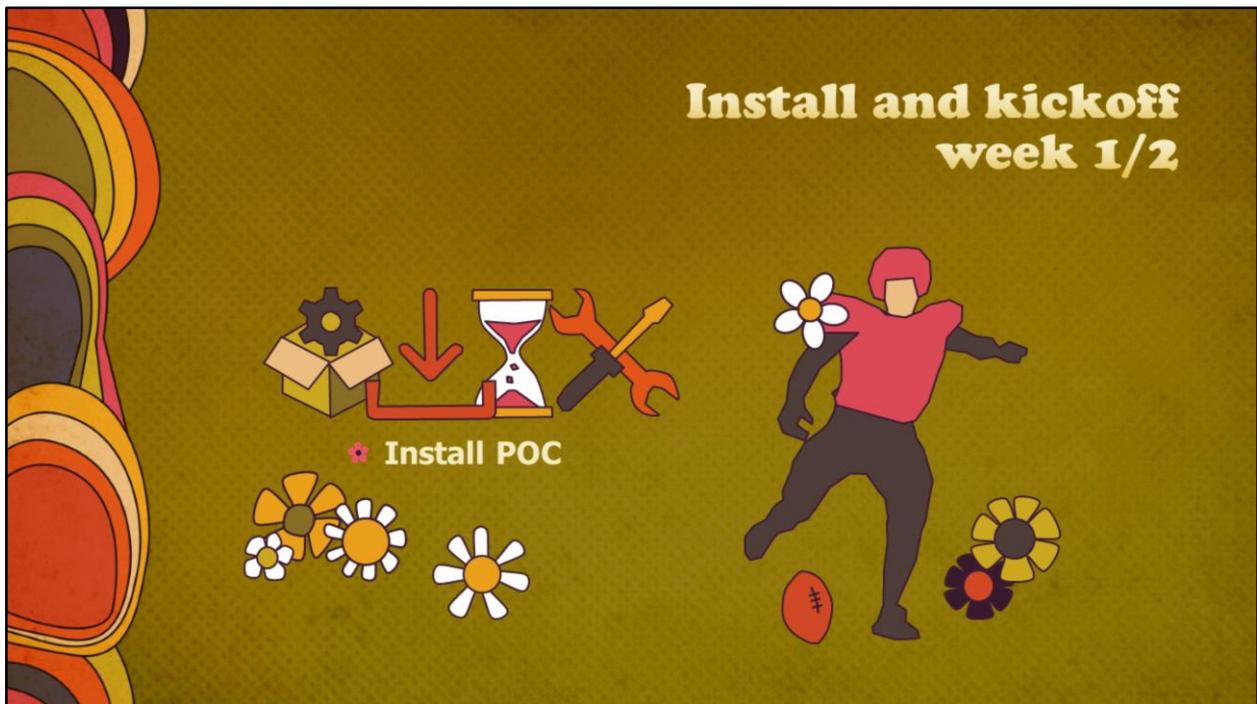
Dedicated time and space



We had a short lead time of 10 weeks from install to go-live.

So a dedicated approach was necessary.

We had update days on Monday and Thursday and worked with each other in one room with the ICT guys in the room next to us.



Week 1 was the install week
In that week the IT guys installed the upgrade on POC.

Week 2 was the kick off with everybody who was involved with the project: the readers, the DUBBERS and the ICT.

Reading and rating week 2

✿ Reading & categorizing



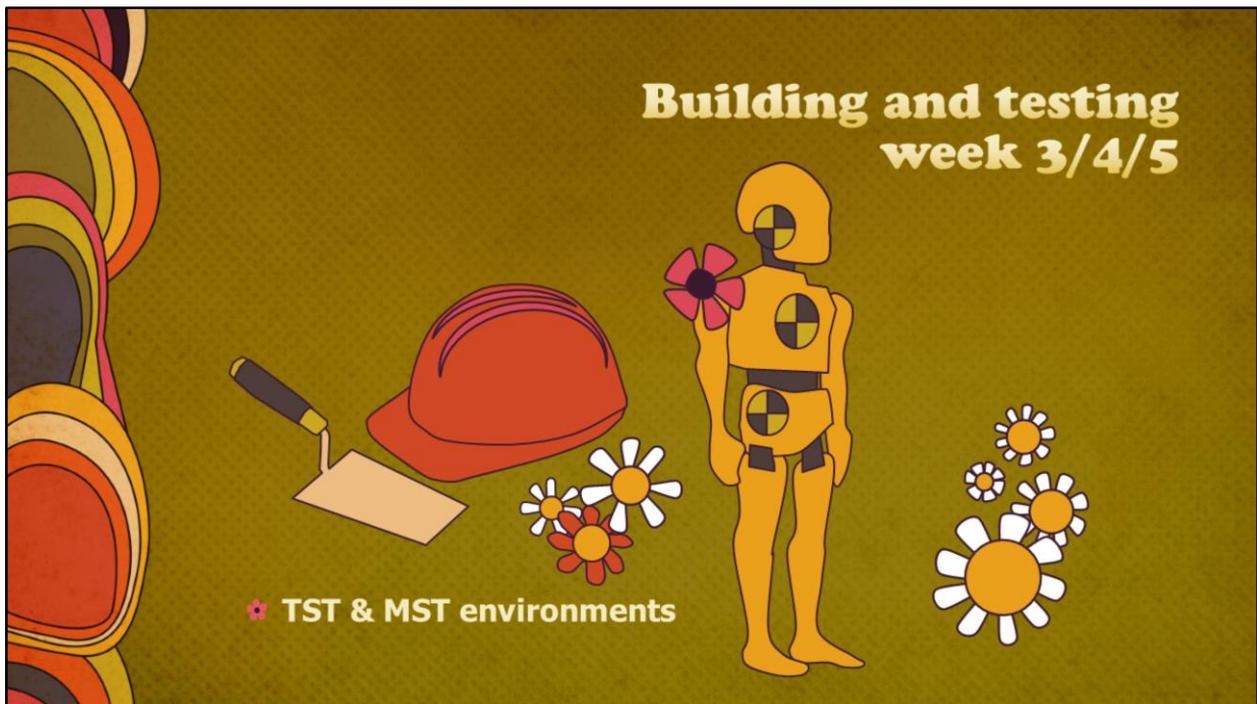
✿ Automatic changes
✿ End-users' choices

We started reading on Monday with the goal to read all the notes on that day. During the reading the objective was to already think about what kind of category the release note belonged to. There were automatic changes, choices for the organization and not applicable ones. The DUBbers also started with the build.

In Week 2 we collected the questions for a survey for the end-users and building. At the end of week 2 we sent out the survey to all the end-users in the organization.

We sorted them out in two categories. Automatic changes were the end user could respond with "like" and "dislike" Choices for the end user where they could respond with "Yes, want it", "no we don't want it" or with "I don't know".

The end users responded on the questions and that's how the scope was decided. We also asked for feedback from all user groups.



The weeks after that, so week 3,4 and 5 were building weeks.
The dubbers worked in that week on Monday and Thursday on the update.

After the weeks of build we started with the testing period.
In week 5 we upgraded TST and MST and sent the new build to TST and tested it out.

Training and superuser week 5/6

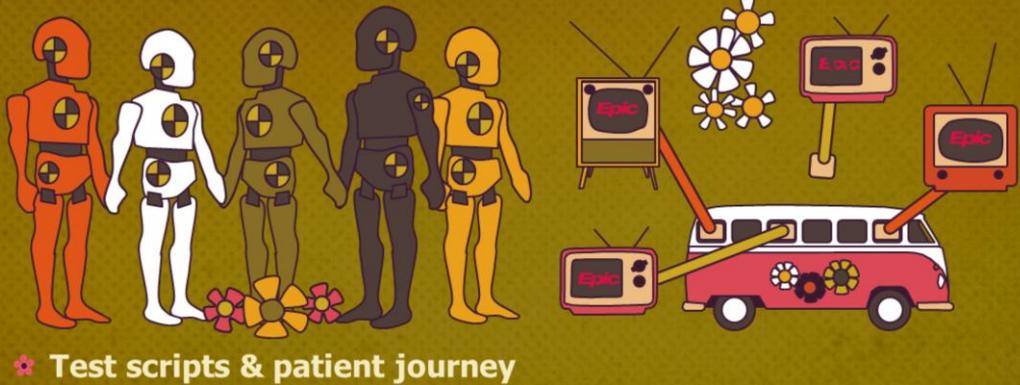
- * End-user & playground
- * Testing own workflows
- * Welcoming feedback



When the test was successful the build was sent to MST as well
The end-user who started to work in the hospital, get trained in the new environment.
And the end-users could also already look in the playground environment to see what the changes were for them.
We also asked the end-users and especially the doctors to simulate their work process so that they could do a test from their own working place.

In week 6 we organized a superuser meeting.
During the meeting we showed the new stuff.
After the meeting we let the superusers test their own workflows in TST.
We didn't use a test script for it.
We just let them go through their own work process and navigators etc. getting familiar with new functions and lay outs.
Gaining feedback on errors and input for improvements

Integrated testing and interfaces week 7



Week 7 we organized an intergraded test with the team.
We have a big test script with 9 different workflows within we follow the patient through the hospital. All the application are covered in this script.

Next to all the test weeks we tested the interfaces with the third party systems.
(The hippie van here is the interface box, connecting different old tv's)



Week eight was the dry-run 1, we pre-installed the update on REL.

After the update was installed the teams datacouriered their build and performed critical tests in REL.

This was also a good moment to check if all the build was correctly documented and to see if nothing from the build was missing.

During the intall, the time was also recorded so that we know how much time the update will need.

After the dry-run, REL was newly refreshed from PRD so that we had a fresh backup for the fall back.

On the Friday of week 8 the transparent upgrade started.

The Monday after the transparent started, Week 9, we performed an extra dry-run in SUP.

The teams did again a short critical test in SUP.

On that moment the manager decided to give off the go for the upgrade. The upgrade was scheduled the next day.



We scheduled the down time from Tuesday on Wednesday from twelve to two a.m. In the night self the actual timeline was like this: (and this is an example of the last upgrade):

00.00 At twelve the system was down for the end users.

00.06 At six past twelve the transparent upgrade was started.

00.14 At fourteen past twelve the transparent upgrade started, there were no errors. After that, the IT guys had to do set ups for VM-ware and the interconnect servers.

00.37 At thirty-seven past twelve, the Epic team member started data courier the build for all the dubbbers and performed some critical tests.

01.00 At one, the epic team and the interface team was ready.

01.10 And at ten past one all the end users could access epic again.

It was a quick downtime and that's really nice for the end-users in the house.

A month later we scheduled an extra downtime to install fixes from the upgrade.

We schedule the downtime also on a Tuesday on Wednesday night.

Thursday before the downtime we sent out communication to all the interested parties.

In the communication we always tell that the downtime will take two hours.

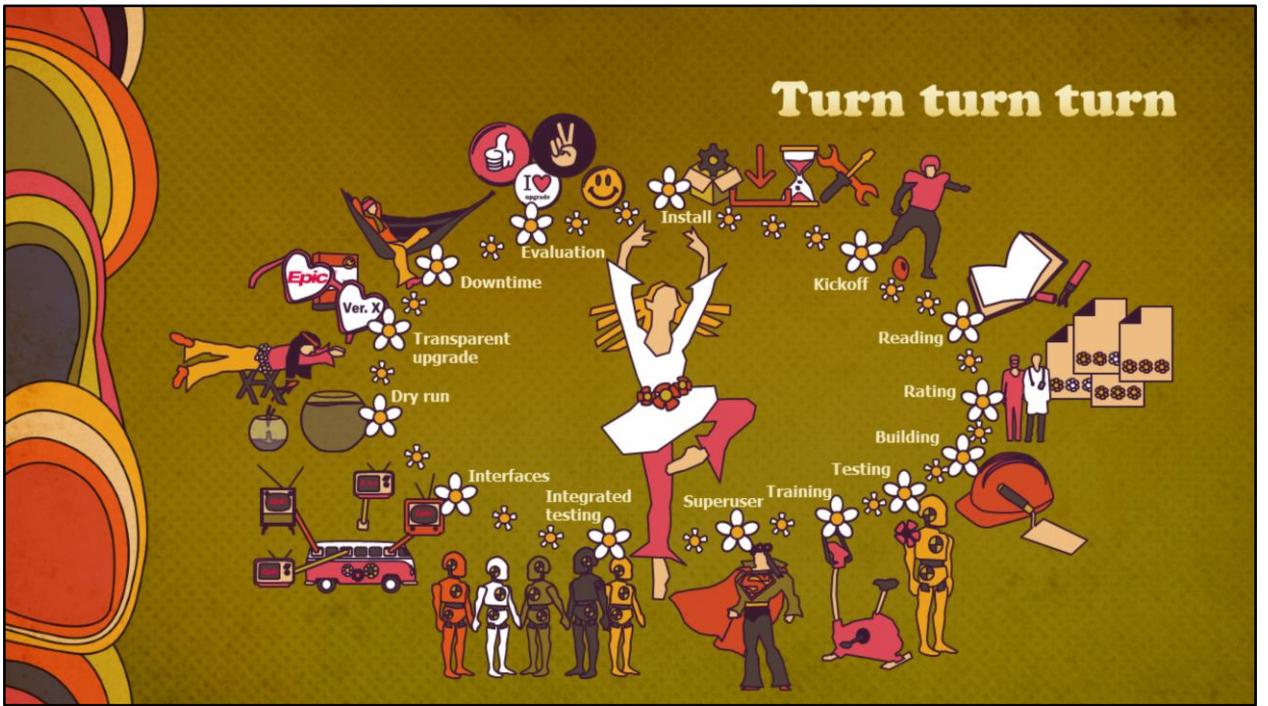
So that gives us some margin for troubleshooting issues.

After every upgrade period we held an evaluation.

We evaluate with the teams, the super users and with the project board.

During the evaluation with the teams we'll talk through how the whole process was, what the lessons learned are and about our experiences.

With the superusers we evaluate with a questionnaire. We collect all the answers and then evaluate with the project board where we discuss the answers of the teams and super users.



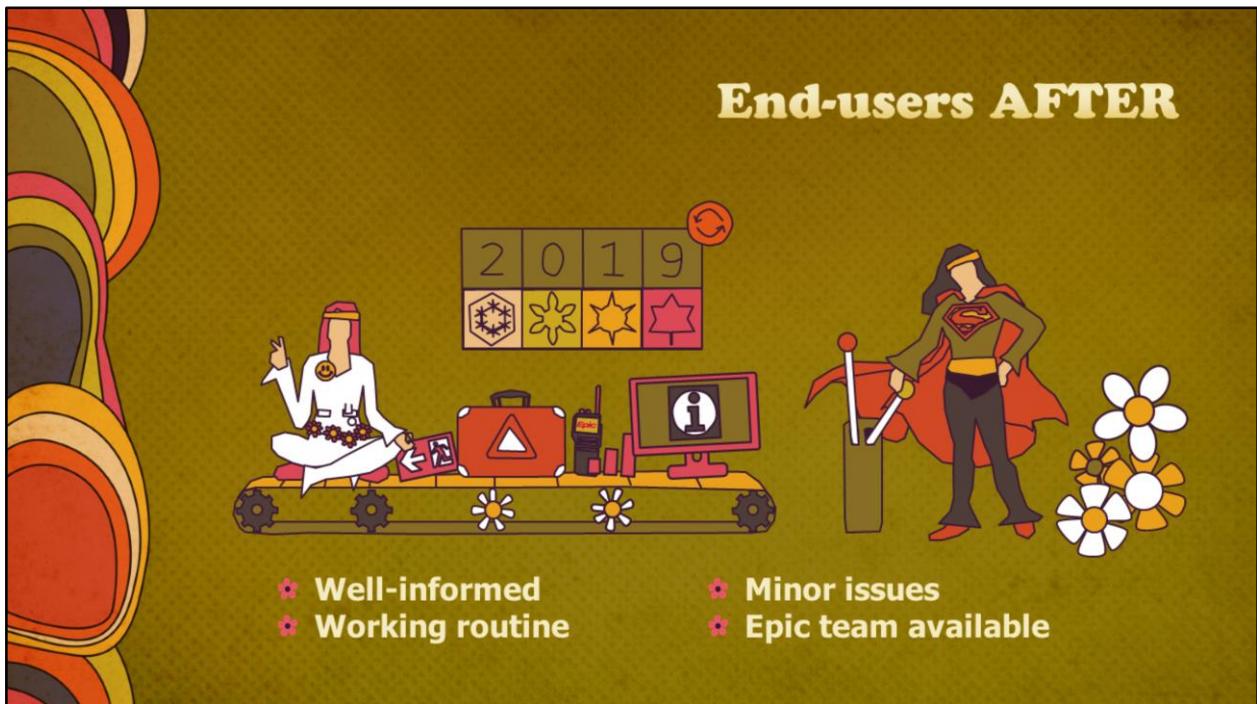
With the evaluation a new update cycle starts re-using the update scenario.



Let's not forget our end-users. What do they think about all this and what are their experiences during their daily work.

In the old upgrade strategy (every two years an upgrade) the end-users were prepared for the upgrade.
They needed a lot of training and guidance in their work.
They felt that the pressure of them was huge.

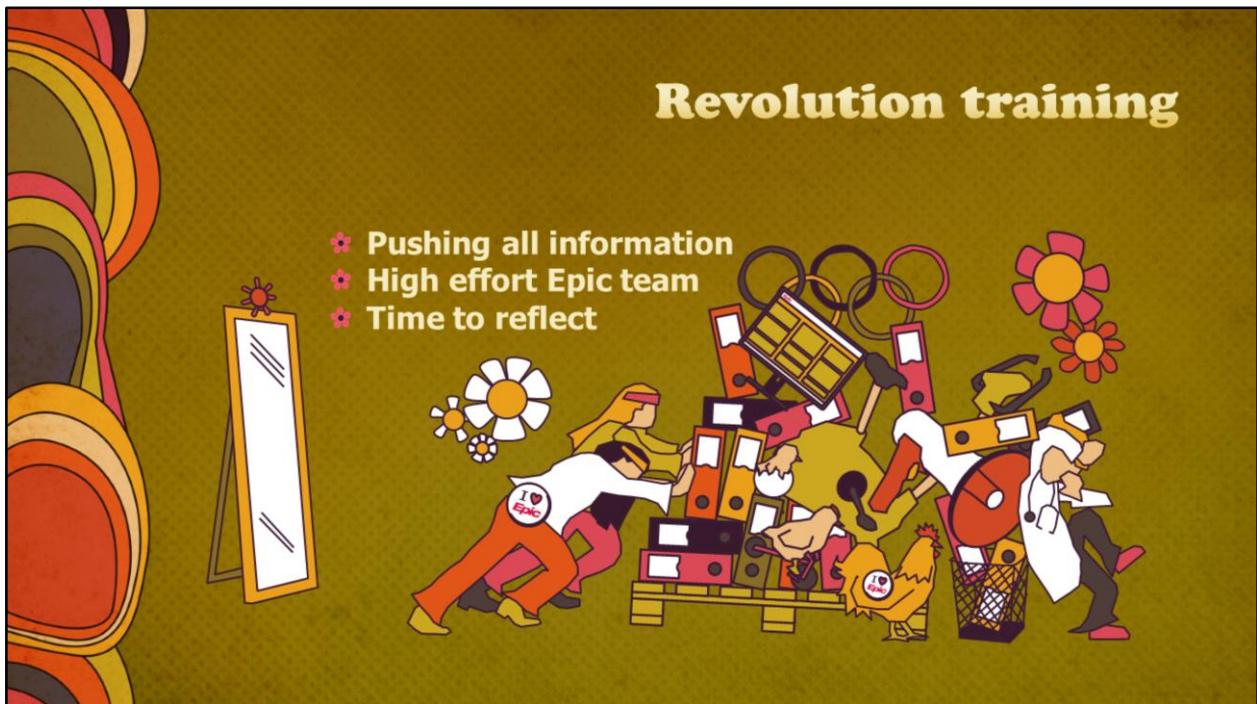
Superusers worked extra hours to train their peers on the unit and also to give support during the go-live.



The new strategy (season upgrade) is felt like a regular downtime. It feels like a routine for them, when they see the communication on intranet, they know what to do, where they can find the downtime box and also what the procedure is.

Another significant improvement is the availability of the Epic team. During the big upgrades the whole Epic team had their focus on the upgrade and didn't have much time to do other projects for 6 months. With the quarterly update only a part of the team is focused on the upgrade and the rest of the colleagues have enough time to do other projects.

Another positive effect of the quarterly upgrade, there are less issues in comparison with the big upgrade. With the big upgrades we could expect issues with printing and all kind of strange issues. With the quarterly update we never had print issues! And only some minor issues that didn't had any impact on the work processes.



New stuff comes with training.
 Epic training in our hospital has evolved last few years.
 With a growing Epic system maturity (see egg, chick, chicken) within a large group of end user, the major upgrade in 2016 was the turning point.

We made tipsheets (see folders (ordners)) for all changes. Learning home dashboards were build and filled for different target groups (see monitor). Information sessions, flyers and all sorts of communication (huge megaphone) were organized and superusers received instructions how to deal with changes and were asked to take proper measures for their own departments. We were pushing training into the organization.

Our training resources were limited and at that time rumors of the introduction of a quarterly upgrade became more and more reality, it was about time to reflect (see mirror) on our training strategy.

Starting with fact check.
 In Spaarne Gasthuis we experienced high maintenance of training material.
 Lots of Epic information are distributed in all kinds of channels.
 Tipsheets and e-learning modules scored low on user' statistics. (see bin where new unread material end up)
 Exploring technical opportunities, having dialogue with key users, user groups, experts and many more, developing and testing out a new way of working, Spaarne Gasthuis renewed the Epic training strategy.

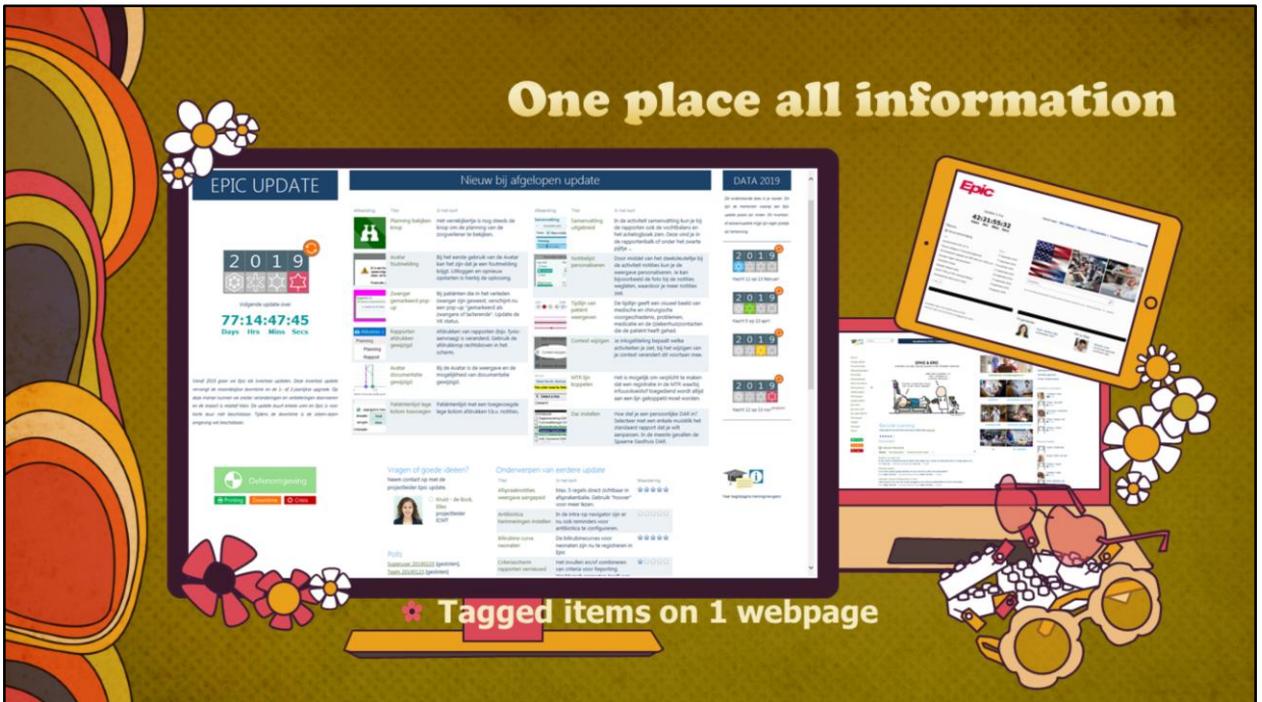


These are principles we go for now.

- Focus on Epic system-only information.
- Training on the job of peer to peer learning are company-wide strategies. (academic hat for dr as teacher/trainer)
- Applying failsafe criteria means focus on high risk changes only. (Signs with focus on red only/mostly, glasses filter on red)
- Avoiding overload of information and training we changed communication flows "from push to pull".
- Experienced end-users know functions better than Epic team and this means shifting ownership of training from Epic team into organization. (ilove-button shifted from epic to dr)
- And don't forget, make training or information fun! Like this kind of presentation.
- Have guts to let go, Epic teams! This (letting go) seems to be quite unique Epic worldwide. (based on Userweb and Dutch network)

All this helps us to keep up easily with the speed of the quarterly upgrade cycle. It fits well with our users' behavior. And good thing to know, is that we could use our existing available digital resources.

(Monitor in Google style as symbol of user friendly information site)



Training items, we did write, can now be found in one collection on SharePoint (our internal internet platform). This includes one specific page for upgrade changes and instructions. How does this look like?

In short the Epic team is only writing items that is really needed.

This is done in one big database with labels/tags on each item.

Inpatient users are only seeing inpatient items because the tag Inpatient.

The update page displays Update labelled items only.

See also the rating system on this page.

Users can also use the search function in an easy way.

Countdown timer shows how many time left for go live.

At the right a screenshot of our own update project site is displayed. This was set up one time and we can now re-use it for new coming upgrade cycles.

(Long version: The dub team prioritized release notes and publish active what is really needed. Instructions are written directly in the SharePoint collection. Upgrade items are real-time visible in one view on a upgrade page. The organization can vote for certain release or prepare themselves for automatic changes by reading the instruction. They can try out their own work process in the playground environment when it suits them.

Making instructions more appealing and easy to read, video's, infographics, work diagrams can be included with a bit of help of the learning graphic designer. We still want to explore social learning. Think similar like starting discussions and commenting on nowadays social media.

Curious for more details of SharePoint?

Create one database. Keep items (training blocks, Lego bricks) as small as possible. Label items with proper keywords. Design webpages that really matters for your target groups. Use visual attractive layout by copy paste from external websites. Load database-items on the pages, making use of proper filter on the labels. And very important, ask for feedback from target groups and learn from site statistics. Keep your database clean and up to date, re-use or renew items and share items on different pages. And invite superuser or other users to co-write items! Training has become a shared responsibility in Spaarne Gasthuis.)



What are the lessons learned?

By starting up the transparent upgrade a lot of databases directed available from PRD were locked.

We received a lot of questions about the headers who end-users couldn't edit anymore. Normally end-users shouldn't change their headers that much but we just rolled out a project where we cleaned up all the headers for the end-users and instruct them to redesign their own headers.

So that was a lesson learned. We added this to the communication letter.



Another thing was that the first time the ICT was working a long time, after the system was already up, to check if they did all the post upgrade steps.

The second time they created a checklist and they start working with Kuyper. That worked out really good and the second time they went home after the update instead of being here all night.

What we see is that the pressure on the ICT guys is high. Su's need to be installed on all environments (see boxes with environment icons) like POC, TST, MST, REL, REF, SUP and PRD.

The interconnect servers need to be update and the webserver (for My chart) as well. There are only two persons who can perform the steps so the pressure (look at his red face!) on them is high.



The experience for the Spaarne Gasthuis Epic team is that it feels like a never ending story. (including seeing very high hurdles ahead)

Before there was a period of time that the Epic team was focused on the upgrade. Now the teams have to do it two days a week next to their normal work, like projects and ict-management (compare to camera with wide angle focus).

We are searching for a better approach instead of two days a week for 10 weeks long, we are going to change it to 5 weeks 5 days a week. (Dedicated focus like macro photography)

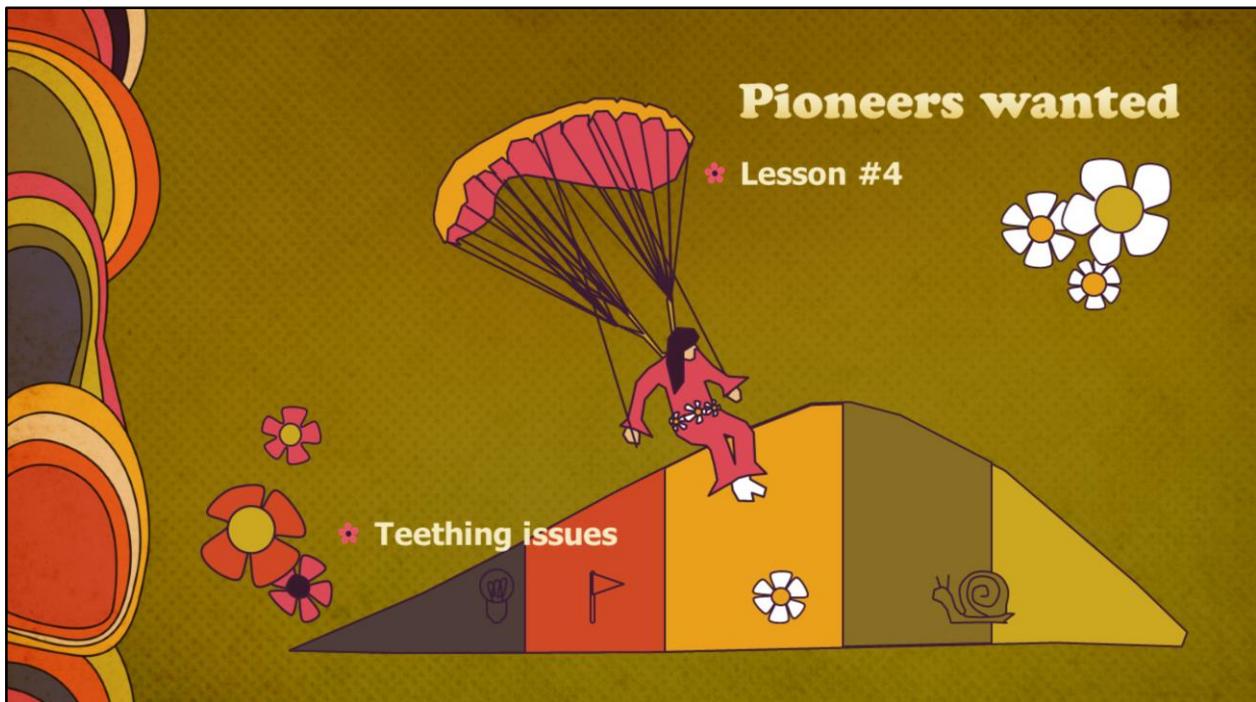
With using scrum method.

The first 2 weeks are reading and building weeks.

Then two test weeks.

And one go-live week.

Excited and well-prepared, we'll start with this approach next week actually.



And the last lesson learned is that being the third hospital worldwide going live on the latest release also gives problems.

The team finds issues.

And short before go-live there are a lot of SU's with the fixes for that. But the SU's need to be load on all the environments if we want it to have it in PRD. That gives an troubled period of time just short for the upgrade and that also makes that we said OK we know about this issue we will instruct the end-users with the workaround and the fix will be in the next downtime.

Instead of the early ones, the wish of the team is to join let's say the early majority (behind by 3 months) because then most of the teething problems are gone. So now other upgrade "pioneers" wanted. Any volunteers?

(Inspired by theory diffusion of innovations: categories of adopters are innovators, early adopters, early majority, late majority, and laggards.)

The last two lessons learned are the reason why we have just have an upgrade break of three months in the past period. Next week we'll start with implementing the May release and the go-live will be the thirteenth of November 2019.

Go upgrade



Are you ready to upgrade?
Are there any questions?

Stay in touch

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Spaarne Gasthuis, The Netherlands

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We want to thank you all very much for listening to our presentation.
Let's meet up and stay in touch!



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