CHANGE MANAGEMENT

***At this 01.05.23 Roundtable 55,** NOREX Members discussed frequency to allow changes; strategy used to define change windows; intake and prioritization of change requests; Change Advisory Board (CAB); change management toolsets; integrating automated configuration change technologies to catch unauthorized changes; tracking changes in SaaS, IaaS, or PaaS configurations; security review of changes; IT Change Management integration with overall company change management process; maturing Change Management / change enablement process; and change Management in DevOps, CI / CD, and Infrastructure as Code.*

EXECUTIVE SUMMARY

When discussing security review of changes, and the criteria used to add a security approval or task, a Business Systems Administrator stated each of their approvals or changes have a security approval in place because any change that is made can open a vulnerability. A Director of Infrastructure said that security review is part of his organization's approval workflow. They have people from the security team on the CAB. As far as threshold, if it is changing access rights or there are a couple of other gates that they have as requirements, he can look at what is in the actual workflow. A Member wanted to know what kind of processes organizations have to integrate security in their change control process. Is the process is part of a weekly CAB meeting or does it need to get through the gates before that change even gets to the CAB meeting? It was shared by one organization that once they determine the drop-dead date of an update, the security review has already happened to see if there are any vulnerabilities that need to be plugged before they move to a production release. Security is at the table from the start and throughout the whole process of determining what gets released with each release. A CISO agreed that if you wait until the process is close to the end before involving security, you have already lost. Security and IT both need to be there at the very beginning of the process change, otherwise you will be playing catch-up.

Regarding the frequency to allow changes to be implemented and the strategy to define change windows for the year, a Member with a Software as a Service (SaaS) company stated they allow changes to happen whenever they need to happen. Application development is a category of change, as are infrastructure related changes, because they operate their own infrastructure. Another Member stated they release daily, multiple times a day, or whatever is needed from a business perspective if it is not intrusive. To that point, they do have a maintenance window weekly, each Sunday, to allow those more intrusive change activities to be performed. A Vice President of IT – Core Services stated her organization has two change windows a month and finds it quite restrictive. Her financial institution sees exception changes occur frequently when they are limited to just the two windows. She wanted feedback on how others have set their change windows. A Director of Infrastructure recommended looking into what is called feature flagging. There are several different products, but the idea is that developers can write the code and wrap it in a feature flag, meaning it is off by default. It is released into the wild, and then you can turn that one feature on to enable it. They made that change two years ago, and it is greatly successful. Their development teams write the code and get to code completion. They turn it on in their testing environments and do all the testing there to know that they have a solid product on their production tier. They turn that on when everything is done, after they released it in a decoupled manner.

Additional headline topics:

- **Change Management** in DevOps, CI / CD, and Infrastructure as Code.
- **Change Advisory Board** and frequency of meetings.

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Moderator: We're going to start with some basics, frequency of changes, prioritization, a little bit about Change Advisory Boards and other committees that are prioritizing change. Then we're going to get into toolkits, actual products, tracking, and what do we do about unauthorized changes and security issues. We'll talk about how change management is integrated into other departments in your organization like project management. We'll talk about the hybrid workforce and how you're handling change with the hybrid workforce these days. And then, finally, we'll get into issues with continuous improvement, continuous deployment, DevOps, and infrastructure as code. Without further ado, we're going to get into our first questions.

TOPIC: Frequency of Changes

Drew F.: We allow changes to pretty much happen when they need to happen. Basically, we have a couple of different categories of change. I guess I should state we're a Software as a Service company. What we do is application development, and that's a category of change for us. And then there's also infrastructure related changes because we operate our own infrastructure. We allow changes to happen when they need to happen. The application development is largely handled through maintainers and using that as a gate to allow those releases into the wild. Then from the infrastructure side, we look at those as whether they're going to be changes that may require a maintenance window, stuff like that. Anything to say it requires a maintenance window flows into the maintenance window schedule for that month. Anything else that can be done in a minimally disruptive or non-disruptive pattern we allow it to happen when it needs to happen.

Moderator: Thanks, Drew. Pam, your hand is up. Also, I put up Melanie's question. Melanie, if you're with us, be ready to talk with us about this as well, because it seems to flow into her question about defining change windows. She goes into a little further explanation on the next slide. Pam, what do you have to say?

Pam M.: Yeah, we are very similar to Drew. We will release daily, multiple times a day, whatever is needed from a business perspective if it's not intrusive. To that point, we do have what we refer to as a maintenance window weekly, each Sunday, to allow those more intrusive change activities to be performed.

Moderator: Thanks, Pam. Melanie, I think I'm just going to go to your next slide. Your first one asks what strategy is used for defining change windows for the year and how many change windows occur per month. But then on the next slide you actually have a question and some advice. Do you want to kind of give us a little more information on that?

TOPIC: Change Windows

Melanie F.: With the first one we have basically two change windows a month, and it's really quite restrictive, in my opinion. I'm looking for how others are doing it. I like what Drew said. But we have a bit more control out over our environment. I'm with a Federal Credit Union. It's financial institution. We deal with a lot of impact to members, and we want to lessen that impact as much as possible. I can see both sides of the coin why we would limit those change windows to just two times a month. But again it's quite restrictive. We do see a lot of exceptions and emergency changes and things like that. Well, emergency changes are different, but I would say exception changes occur a lot when we are limiting ourselves just to those two windows a month. Just looking for some more feedback from others on how you set those windows up.

Moderator: You have written here in a situation where two groups are making changes that could impact the same application, restricting each group to their own window should allow you to quickly identify the specific group and change that has caused the negative impact, so that you can roll back only the appropriate change.

Melanie F.: This one, this is really kind of the ideal scenario of yet to be able to implement this across our across our organization or within the department. But this is really ideal for me. Just kind of looking to see if anyone else is using a similar method. Again, in our IT department we've got network, we've got the systems team which handles the server side of everything, and then we've got applications. Again, just kind of looking for some more some more feedback to see if anyone else is using a similar approach.

Moderator: Thanks, Melanie. Drew, you have your hand raised again.

TOPIC: Feature flagging

Drew F.: I was going to say one thing you can do depending upon how much of your application layer you actually control, like if you're writing your own code and deploying that. I actually highly recommend you look into what's called feature flagging. There's several different products, but the idea is that you can write your code. Your developers can write the code. They wrap it with what's called a feature flag, meaning it's off by default. It's released into the wild, and then you can turn that one feature on and then it's enabled. And so you really couple that aspect of knowing what thing might be breaking your infrastructure or causing negative impact potentially. There's a bunch of resources that you can look into. We made that change the last two years, and it's really awesome because your development teams can write their code, get to code completion. You can turn it on in your testing environments. You can do all the testing there to know that you have a solid product on your production tier, and then you can turn that on when everything's done, after you released it in a decoupled manner. That's one way that you can know which thing is actually causing your breakage without maybe having to go to multiple maintenance windows. And then for the infrastructure side of things I guess it really depends on what types of changes you're trying to do. When you're rebooting servers or things like that to apply patches that's a lot harder to work around. And we typically categorize our servers as those things in our cluster, where you could suspend a node. We allow patching of those one at a time, any time, and then anything that isn't clustered you really have to have your network utilization and understand your impact cycles from the monitoring that you have in place. What we try to do is we do it during strategic lows if we can't wait for a maintenance window. But that's typically got to have an emergency moniker on that.

Moderator: Thank you. Drew. You mentioned that there are some products that that help you with the feature flagging. Can you mention some of those here, and then put maybe some names in the chat for us?

Drew F.: We use LaunchDarkly, but there are competitors to LaunchDarkly out there. I'd have to look to see who else we considered when we were going through our selection process. It was a couple of years ago, but I might be able to dig something up from the guys that were doing the work.

Moderator: Is anybody else utilizing a product similar to that, either the one that that Drew has just mentioned or any other product for feature flagging? Well, Drew, if you have further information on what you're using, if you could throw that in the chat that would be great, and then folks will be able to utilize that information. There was a there was a question in the chat and it leads us into our next discussion topic from TJ. Do you have a Change Advisory Board review meeting where there would be more discussions about who makes decisions regarding applications and if they can combine changes? TJ's question is how do you intake and prioritize change requests, specifically system changes, process improvement initiatives, and data reporting requests? TJ, if you want to chime in here as well, we're going to move into a discussion around Change Advisory Boards, prioritizing, and things like that.

TOPIC: Change Advisory Boards

TJ N.: We're in the process of growing from a medium sized company to a very large company. With that comes all the pain points of trying to figure out a better way than just drinking from a fire hose and handling everything like it's a fire. Just trying to figure out if you guys have any advice or on how you've put together some structure around change management and how you guys intake and prioritize requests. Specifically, we have a team dedicated to all sorts of data requests, data and reporting requests. We also have another team that's kind of dedicated more towards process improvement and project management. Both of those are making changes across the board, and they kind of intake and output on different frequencies. Trying to figure out the right method for how we intake those requests and prioritize them, while also giving the business some visibility into what the hell we're doing and why one request is more important than the next request. Anything you guys got there that'd be helpful. Thanks.

Kelly P.: I wish I had an answer for TJ, but what I really wanted to reiterate is that I have the same questions and the same problems. But in addition to that, if anybody has any information on how you get business buy-in for creating this kind of CAB process? I work at rail transport. It's a transportation company, and the process that we have had in place has been here for 60 years probably. I'm trying to change that so that everything isn't coming in like TJ said in a fire hose format and we can make smart choices and efficient choices in what we're doing. Our backlog is thousands of requests deep and we're not going to get through that in the way that we're working now. Anybody who has implemented this change process and had to talk through business buy-in, I would love to hear that as well.

Moderator: Kelly, do you have a Change Advisory Board or a Change Control Board of any kind that meets in a formal way?

Kelly P.: No, I'm trying to implement one. I just started the PMO, so this is part of my development of the PMO is to implement a Change Advisory Board. For some reason, a CAB meeting, the name of that has a negative connotation in our group, and I don't know why. I'm also trying to think of a new name for it, because I need to trick people into thinking that it's not. It's the same thing, but they need to just hear it a different way, I guess.

Moderator: Drew, what do you have to share on this?

Drew F.: One of the things that we did when we were trying to get buy-in for the CAB was to articulate the pain points of *not* having the CAB. One of the things that we said was around this problem would have been avoidable if we had a conversation beforehand, and this was the impact of the problem to our customers. When you start articulating to the business both the business cost and the fact that it was an avoidable thing, they start to want to listen. At least that's what worked for us, for one thing. That was something I wanted to share there.

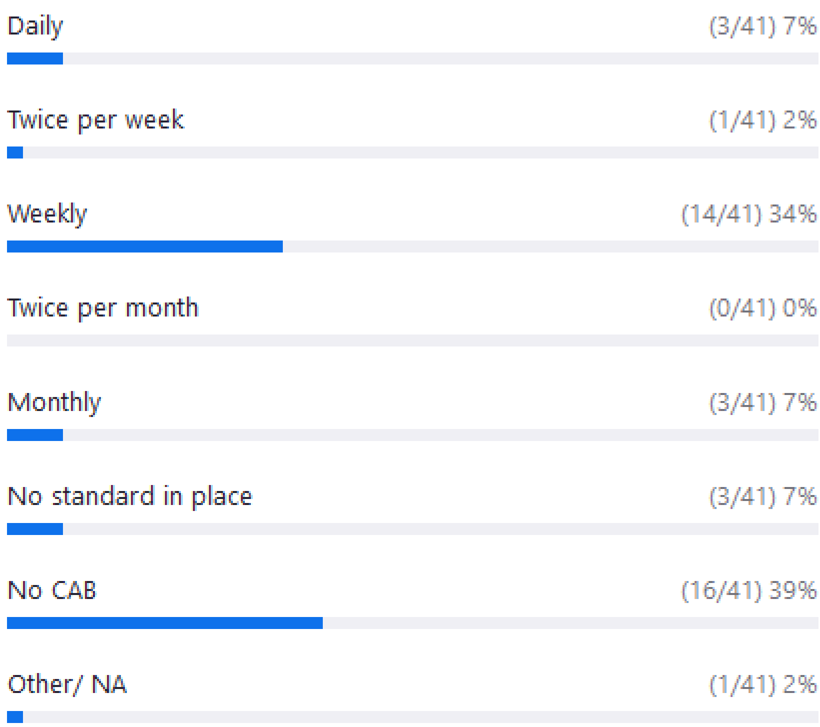
Moderator: TJ's next question is, if you have a Change Prioritization Board or Committee, how frequently does it operate? Who is on it? What is the threshold for requests going to that team? I have a poll that we can take to find out how if you have a CAB, and frequently your board meets. While we're waiting for those results, I'm just going to do a little commercial message here for the information that is in the NOREX Library. As I was studying for this event, I went out to norex.net, did a quick search for change management, and found all kinds of fantastic information. And I'm thinking about you, Kelly, when you're trying to get buy-in from your team. There's a great document out there, number 20-1127, and it's Change Management Process Example. It goes through the entire creation of a change management program. A lot of great information there for you.

> **CHANGE MANAGEMENT PROCESS EXAMPLE**. This guide outlines the resources and process steps required to manage changes to the production environment. 23 Pages (20-1127)

We have a lot of folks that have responded, and I'm going to share the results. It looks like we have some folks that are meeting daily or twice a week, but weekly is the highest number. Some folks don't have any standard in place, and then 39% of you don't have a Change Advisory Board, so I'm sure you're thinking about that as well just like Kelly is trying to get buy-in for something like that. I'm going to go on to my next screen.

POLL: Change Advisory Board Meeting Frequency

How often does your CAB meet?



Moderator: I copied this over from that document I'm referring to where this particular organization characterized each type of change. I know in ITIL it's standard, normal and emergency. But they took the normal changes and defined those further into minor, significant, major. This is the kind of information that you're going to be able to access in the NOREX Library that might help you as you try to standardize things in your own organization.

Types of Change and Approval Levels:

- Standard: A change which has been pre-approved by the CAB or Owner and will no longer require Manager, Change Analyst, or CAB approval prior to implementation. Standard changes are approved on a case by case basis for a period of six months.
- Minor: A change which carries low risk to the IT environment. It does not involve a Business Critical application, does not impact a large number of end users, has not caused an incident in the past, and does not require coordination of multiple workgroups in order to be implemented.
- Significant: A change which carries a median level of risk to the IT Manager, Change Analyst, and CAB environment. It involves a Business Critical application, impacts a large number of end users, has caused an incident in the past, or requires coordination of multiple workgroups in order to be implemented. Requires approval from
- Major: A change which carries a high level of risk to the IT environment. It involves a Business Critical application, and / or impacts a large number of end users, and / or has caused an incident in the past and / or requires coordination of multiple workgroups in order to be implemented. Requires approval from Manager, Change Analyst, and CAB.
- Emergency: A change which must be implemented due to a system outage, an Impending System Outage, or a Security Breach. Please note that for any RFC that does not satisfy one of the three criteria set forth here may not be submitted as an Emergency Change. Requires verbal approval from a Manager prior to implementation. An RFC must be created and approved by a Manager within 1 hour of implementation.

Any further discussion around the establishment of a Change Advisory Board and getting buy-in? Looks like there's some great stuff going on in the chat.

CHAT:

Christine H.: Melanie, do you have CAB review meeting where there would be more discussions about who makes decisions regarding applications and if they can combine changes.

Troy A.: Smaller changes more often are much easier to deal with. Obviously, the more you change, the more things can go wrong, which adds to any downtime.

Drew F.: LaunchDarkly https://launchdarkly.com/

Christine H.: Having the right stakeholders in the decision making helps reduce the number of fires.

Melanie F.: Christine, yes, we do. We meet twice a month to review change requests before they are made. We have two approvers who grant approval beforehand.

Christine H.: For larger corporations, we typically have change meeting with stakeholders weekly and then communicate via email what the decisions are.

Melanie F.: This also allows others to weigh in and wave a flag if there are any changes that may conflict with each other.

Dave M.: We call it a "CAT" (Change Authorization Team).

Melanie F.: I like the weekly meeting approach.

Walter W.: What suggestions do you have for merging disparate change management processes into a single comprehensive process?

Dave M.: We couldn't use "Board" in the name either.

Bill M.: We use an IT Steering committee which is made up of senior managers from across the business who review requests and help IT prioritize the changes.

John S.: And if you can't get buy-in for a steering committee then you are free to ask, "So I get to unilaterally decide who gets their requests met?"

Janet A.: For intake & prioritization, a prior org I was with had a Demand Management meeting with the business which was separate & much earlier in the process of CAB. As development requests were made, they were given a prioritization by the requester within their line of requests, then it was brought to representatives from the larger group across the org and it was a give & take. Many items are regulatory in our world so that weight is considered. Once developed & ready for deployment, it went to CAB.

John S.: Can you note that document number again in the chat?

Calvin Y.: At my previous company where we were implementing homegrown software used by employees, enhancements, etc. were gathered through somewhat formal process with end-users with their inputs in terms of project categorization (bug fix, enhancement, etc.), criticality / impact / benefits, and then the development team's input on dev time needed then the final list is more officially reviewed with senior management to be prioritized and approved. All these meetings were organized by the (project / system) leads of the development teams.

John S.: 20-1127 Change Management process document.

Drew F.: Here is a link to some competitors of LaunchDarkly: https://launchdarkly.com/compare

<u>TOPIC: Change Management Toolsets</u>

We’ll move on. Jason is talking about toolsets for change management. Can others share tool sets that you're utilizing for your change management automation, if you will, and if you're satisfied with those? I see ServiceNow coming in the chat. It seems to be a popular tool that's being used. Any discussion around that, or pros or cons or other tools that are being utilized out there for change management? Take a look at what's going by in the chat.

We'll move on to Jason's next question, which is still around tools but brings in a couple of other ideas. Aare you integrating automated configuration, change technologies to catch unauthorized changes? If so, how are you doing this and what toolsets are you using to achieve it? In the document I was referring to, there was some discussion around unauthorized changes. Are any of you seeing that happen in your organization? How are you handling that?

<u>CHAT:</u>

Bill M.: We use ServiceNow Change.

Drew F.: We use ServiceNow for changes as well.

Mary W.: We also use ServiceNow.

Christine H.: ServiceNow.

Gary H.: ServiceNow.

Tyler B.: ServiceNow also.

Mary W.: We did a short evaluation on Jira Service Management.

Brett D.: Moving to Freshservice. Have nothing now.

Gabe G.: A cheaper alternative to ServiceNow is TDX.

John S.: Evaluating Jira SM as well.

Janet A.: At previous org, we used ServiceNow for both ticketing & change management which assisted in many ways to utilize holistic approach for Problems / Incident / CM.

Christine H.: The approval automation is easy to track and find the place in the approval workflow with ServiceNow.

Isaac S.: ChangeGear by Serviceaide has met most of our needs.

Christopher Z.: ServiceNow.

TOPIC: Unauthorized Changes

Pam M.: With regard to unauthorized change, I know that ServiceNow has a component or a plugin that can be used. But we determined that we were better off using a product from Evolven. Evolven will allow us, based on whatever it is you define you're looking for, you can set those tools up. It's very similar to Tripwire or some of those other more expensive tools where you can identify changes that were either logged or not logged within ServiceNow against that respective configuration item. We're very happy with Evolven so far.

Moderator: Any other tools being utilized or any other discussion around how you're dealing with unauthorized changes? Kelly, in your environment where you say you have such a backlog of things to consider and to prioritize, are you also having an issue with folks just going ahead and making changes that you have not authorized?

Kelly P.: Not really. Especially on the application development side, which is where the PMO is focused on for the most part right now. We use Azure DevOps to document all of our PBIs. And I fight very hard to put it politically correct, to not allow anybody to create a PBI in there other than my team. So if something is getting done outside of that, I'll see it in the release. I know that does happen, but I'll see it in the release, and we'll have a discussion about it. But the backlog is all in Azure DevOps, and I don't have any visibility or anything any kind of tool that flags and tells me that something went out. I have to monitor it.

Moderator: All right, thank you. Any other discussion around this before we move on to the next topic? Drew, you mentioned that you're a Software as a Service company. How are companies ensuring that changes are being tracked in SaaS and Infrastructure as a Service and Platform as a Service configurations? Anybody dealing with this? A few of you voted for this topic.

TOPIC: Tracking changes in SaaS, PaaS, and IaaS configurations

Nitin T.: I have the exact same question. Our Cloud governance does not include change control right now, so it's kind of how do you extend? It's not our traditional corporate IT group doing a lot of our Cloud deployment. Understanding what tools people are using, I think, is useful for us as well.

Moderator: Any suggestions around this? I'm sure that most folks are utilizing some sort of Software as a Service. Drew?

Drew F.: We have a lot of controls where people can't actually make the changes without the actual approval in place. And then there's a strong auditing function that also is coupled with that. If someone gets creative and figures out a way to get something out there in an uncontrolled manner, we were able to detect that and then plug that poll appropriately. But, it's also honestly, it's a cultural thing. If you work with your teams to build a culture around why change management is good and just releasing things out there without that touch point you could create more problems. We have a financially down SLA that we have to live up to for our customers, and that's our pain point right? Because you're an as-a-service company, your renewal rate is tied to the quality of the service that you provide. Changes directly impact your ability to provide a quality service. So there's a lot of cultural things. And then there's a lot of auditing things behind the scenes that make sure that we're following the process that we say we're following.

Christine H: There are multiple ways that we can hold people accountable within ServiceNow. That's where we keep track of the workflows and the approval flows, and specifically for SaaS products there's always release notes. But then you identify who your stakeholders are to allow them to weigh in, challenge the changes, and have open transparent discussions about those changes and why they may be needed now versus later. Between working through CAB and working through ServiceNow, you put those controls in place that foster those dynamic conversations. If you don't have those tools in place, then it's manually getting everybody on the same page to say this product has this stakeholder. This who you want representing you in decision making about updates or releases. My suggestion is just if you don't have the tools, have those manual conversations around who is authorized to make changes and ensuring that those people are the only ones with the ability and the control to do so.

TOPIC: Security Review of Changes

Moderator: Thanks, Christine. Do others include security review of changes? What criteria do others use to add a security approval or task? Does this speak to anybody?

Christine H: I would say that each of our approvals or changes have a security approval in place whether you expect there to be security impact. Any change that's made could open a vulnerability. My suggestion would be that any change included security approval.

Moderator: Thanks, Christine. In the chat there's a few comments about the security team, according to Janet, being represented on the Change Advisory Board, Governance, and Vulnerability team members.

Drew F.: We have security as part of our approval workflow. Like everyone else was saying, we have people from the security team on the CAB, and then as far as the threshold goes, if it's changing access rights or there's a couple of other gates that they have as far as requirements I can look at what's in the actual workflow. But basically, if it's changing, like opening up a port that previously wasn't open, if it's adding maybe a group to a permission on a share, or granting a group access, it's not new within your environment. All of those are examples of when we engage our security team for them to provide their approval and / or their recommendations on processes to make sure that's happening in a secure manner.

Moderator: Thanks. Others are chiming in saying that security is represented on their CABs. Bill is coming in saying we have a check box on our ServiceNow change forms. If the change needs a security review, then the programmer checks the box. If the box is checked, the security will be required to approve the change also, and his security team is also represented on his CAB. Nitin, you were interested in this topic. Do you have any other questions to ask the group around this?

Nitin T.: Well, mainly for the security team. For example, if you're doing an application change it's not a quick review for the security team to say I’m going to do a code review, or I’m going to run tools or I’m going to inspect your code. What is the process? Is it in your weekly CAB meeting? Or does it need to get through these gates before that change even gets to the CAB meeting? What kind of processes do people have to integrate security in their change control process?

Christine H: In our case we have those conversations. Once we determine the drop-dead date of an update, the Security Review has already happened to see if there's any vulnerabilities that need to be plugged before we move to a production release. They're part of the conversation. They're at the table throughout the whole process of determining what gets released with each release.

Nitin T.: Thank you. That's useful. I mean, I think our organization we have hundreds of products, so it's a little bit harder for us to manage our releases as controlled, I guess. It's trying to figure out how to herd the cats and make sure the security guys are included.

Christine H: I would suggest that messaging needs to come from higher up through the organization to say this is the new process that we're going to use for changes. Anything that doesn't have the Security Review is going to be considered unauthorized. And then you guys need to determine what the consequences of having an unauthorized change are. It's not just one person managing the whole thing. It has to be a group effort, and the right people have to be at the table to do that. The messaging coming from higher up in your organization may help you establish the process.

Moderator: Christine, I was just looking at your company to understand like how large of a company you have. How large is your company, just to give some perspective for the other folks?

Christine H: The experiences that I’m communicating about are from working at a company that’s very significant in size and scope. And lots of dances to get to the release. But without the processes the changes wouldn't be effective. It would be chaos.

Moderator: Thanks, Christine. We have a hand raised, and also Janet is saying in the chat CIO buy-in is absolutely necessary, and CISO buy-in as well. Rick?

Rick B.: If you’re waiting until the process is towards the end to involve security, I’m a CISO, then you’ve already lost, guys. I hate to tell you. Because security and IT need to be both in at the very beginning of the process change. If they aren't you're playing catch-up. Quite frankly on the security side we're just tired of playing catch-up, because we’re constantly trying to get ahead of the game. We're using AI, a lot of other tools. And yet for whatever reasons, I’m going to pick on operations, doesn't like to include - they want to get things done fast also, right? So they feel that shortcuts at times are the way to do things.

Moderator: Rick, you've struck a chord here. I think there's a lot of agreement going on in the chat. Tell me, with your organization, do you feel represented in the in the Change Advisory Board? Do you have a Change Advisory Board? Are you there for the beginning of the discussion?

Rick B.: Yes, but there's a lot of things that people consider that don't need to go to the Change Advisory Board. Oh, it's a little thing. I agree with that to a certain point. We have a lot of remote job sites. As soon as you're bringing in a different way to do something there, you need to involve IT, you need to involve security, and then they backtrack when they're caught. Everybody has their own ways.

CHAT:

Janet A.: Security team is represented in CAB, Governance, & Vulnerability team members.

Tyler B.: Our Security team is on the CAB meetings also.

Bill M.: We have a check box in our ServiceNow change forms. If the change needs security review then the programmer checks the box. If the box is checked then security will be required to approve the change also. Security team is also in the CAB meetings.

Drew F.: Our process is very similar, Bill.

Janet A.: Changes should be submitted several days before the meeting so that all can review as deeply as necessary. Cut off a week before CAB or the Friday before.

Drew F.: Do you use an SAST tool that can be integrated within the developers integrated development environment? There's also scanning that can happen on the repository as a part of a CI / CD process.

Bill M.: For a change to get to our CAB meeting, an IT supervisor or manager must approve the change and security if required. We review the change in CAB and if everyone in the CAB meeting agrees then QA approves the change during CAB.

Drew F.: I can definitely relate to that.

Bill M.: Then the change will be ready to implement after the start date / time has been reached.

Janet A.: CIO buy-in is absolutely necessary. And CISO buy-in.

Patrick H.: Agree! CISO here.

Christine H.: ABSOLUTELY!

Drew F.: Need to change the culture to getting things done includes having security in it. We had to fight for several years to get any change to production has to be approved by the CAB.

Kelly P.: Changing established culture is so challenging. Might need an entire meeting just for that! Several years!? Good to know what I'm up against.

Patrick H.: Lol.

Janet A.: Security assessments at the procurement / vendor management stage can assist with the SaaS / IaaS / PaaS stage as well.

Drew F.: Having a solid change management can definitely help to minimize the rate of incidents.

Moderator: There's lots of agreement with you about including security. You need to change the culture, getting things done includes having security in it. I did some reading about the Change Advisory Board and trying to walk that line between putting governance around things and avoiding incidents and then also not gumming up the whole process and not getting things done. The last one of these that I moderated was around IT Service Management. One of our long-time Members said that to avoid incidents, you've really got to get change correct. And that was his two cents, that change is where it all starts, making sure that your change management is effective and you avoid a lot of incidents that way. Janet says security assessments at the procurement vendor management stage can assist with the Software as a Service and other stages as well. Any more discussion around security? I think we're going to take Matt's question. How does your IT change management integrate with other departments or overall company change management process? Can you just define what you're asking for us?

TOPIC: Integrating Change Management into other departments

Matt G.: We're a global pharmaceutical manufacturer, so a lot of change management is driven around the quality group in relation to the products that we're producing. It feels restrictive in a lot of ways to have an IT change going through this more formalized process, if you will, for what I would consider minor stuff.

Moderator: Any thoughts for Matt? I'm going to bring Nov on as well, because the first question is with regard to projects and project management. Where do you start change management tasks within a project? Does that kind of fit in with yours, Matt?

Matt G.: It does. How does that integrate with other departments? Because IT is providing some of the back end support for some of these systems. For example, sample management in the lab has a lot of IT infrastructure related to it. To even make a simple Windows update or a changeout of a machine with a like-for-like part is a complex process. I'll say that.

Moderator: Thanks, Matt. Nov, are you with us and can you give us a little background on your question as well?

Nov O.: I like to say change management is certainly a big part. I'm not necessarily an IT person. I'm more of a business person in the HR world. But we're undergoing on some very major projects, and I'm very curious about the perspective when you've got a very diverse workforce. I think one of my questions hanging out there has to do with the hybrid workforce was not everybody is in the office so we can't see it. What is the effective means of communication? Part of that question should have been how do we store that communication so that if somebody misses it, how do they go back and refer it? Like I missed that notification. I'm curious how we're dealing that because the diversity of the workforce field, work-from-home, in offices, and so on, I'm just not finding anything that is really consistently good. I'm curious what people are saying to that.

Moderator: Nov, all your questions do interrelate. They're kind of a trilogy. The first one was communication, and then where does change management fall within a project team? Who owns it? And then you go into how to track your major adoption with a hybrid workforce environment. You kind of covered all those 3 questions in your comments. Anything where you'd like to add?

Nov O.: It's like a dog with a ball, and I just keep going on down that road. But no, they all very much related. I would love to hear the audience's perspective, or the team out here. I'm taking to heart a lot of the NOREX conversations as being very, very useful to be applied in the workplace. I'm all ears right now. And if there are tools out there that's always a good thing to understand as well.

Moderator: I understand that Jason has been able to join us. Jason, you had a similar question before this. How rigid or loose is your change control process? How connected is it to other processes in IT like project management, incident management, problem management, etc. Jason, do you want to chime in here at all?

Jason B.: Yeah, you bet. We're starting out with a very rudimentary, almost non-existent change management. We move really fast, sometimes so fast that it shoots ourselves in the foot sometimes. We get a lot done but we're not tracking a lot of things. So when something does go wrong you can see the benefit of having something of a change management to understand what has changed in the environment that could be a contributor to it. I've done a ton of research on this one. And now understanding change enablement in ITIL - they changed it from change management to change enablement. Understanding the level of what you have to do, because you can go full-on and audit every single change done in the environment or you can almost do nothing. There's got to be some balance in there because you've got to keep moving at a pretty fast clip to provide value to the business. But you don't want to strangle it so much to where it's just extremely difficult and very, very time consuming to make a change because change is going to be on every business. As I'm looking at integrating a lot of these processes like project management, and how do you integrate change into that? When do you integrate change into it, and how in depth do you go? What do you consider a change? I'm going down the route of standard, normal, and emergency changes, keeping it very simple. Actually not even looking at having a CAB, but more so expert peers doing reviews of changes so that they understand. And when it's a bigger change it goes to leadership to understand the impact and things like that. But I'd really like to understand people's thoughts in several of those different areas I talked about. I know I put a lot out there.

Moderator: We did have some discussion earlier about a CAB and I think about 39% of the folks on this session don't have one. And you said that you don't have one either, correct?

Jason B.: No, we don't have one. In fact, I'm creating the change management process as we speak, and I've done a ton of research on this. I've talked with Gartner advisors, I've had in-person analyst with Gartner. I've read the book *The Visible Ops*, which was recommended to me. Very, very good book to understand how to actually go implement change management. Like how do you actually go do it? So it isn't just what it is but how do you go do it? We're looking at a lot of the pieces and parts of doing that one. But everything that I've seen so far is you start very, very simple. Step one for us, and I've already implemented this one, is don't make a change without talking to someone. Just talk to someone. Someone that knows the system. Hey, I'm going to make this change. Any thoughts? So we're starting from there.

CHAT:

Jason B.: The 'Visible Ops' book is very, very good for change management.

Drew F.: So you have a lot of validation concerns.

Matt G.: Yes

Janet A.: Change Management & Project Management, the key is having the correct stakeholders on your project team which should touch all areas of the CAB.

Christine H.: MS Teams is a great way to track communication.

Pam M.: We also use Teams.

Christine H.: We conduct end-user trainings through MS Teams as well.

Bill M.: We do User Acceptance Testing. We have end users that must test before we can implement a change. They also help us decide when the change can be installed. We use ServiceNow Test management to record testing.

Jennifer J.: For short quick in-the-moment needs, instant messaging. For formal and more detailed, email. For collaboration, in-person or video meetings.

Drew F.: I'd say Teams is good for communication, but when you need to search historically to find a reason you made a particular decision is where teams has some issues.

Christine H.: Sessions can be recorded and share later as well.

Kelly P.: We also use Teams. How is everyone organizing communications in Teams? By project?

Drew F.: We organize by project or initiative and sometimes by platform maintainers and platform users.

Christine H.: You can add meeting minutes to a Teams group. We track these for each project with individual Teams groups. Kelly, ours are aligned by project.

Walter W.: It's tough to explain that something new IS a change.

Kelly P.: Thanks!

Christine H: Jason, my suggestion to you would be ensuring that you have all the right players at the table. So the business should be represented, IT should be represented, security, anybody that the change is going to impact should be represented and have a voice. And that's your biggest obstacle.

Moderator: I don't know if you were on when we had the discussion around security. Several CISOs chimed in, saying they need to be represented in the conversation earlier than later.

Jason B.: Yeah, my peers, the CISO for all intents and purposes, is a peer of mine. I'm the Enablement Director, so I kind of span all the different functions inside of IT, and I'm helping to mature processes and things like that. We're a pretty tight-knit communication group. So CIO, enterprise architecture, infrastructure, strategic business services, all that stuff. When it's a big one we pull in the business leaders as part of that to ensure that whatever change that we're thinking about doing doesn't have an impact.

Moderator: Jason, I put up your question which kind of boils it all down. What are your plans to mature your change management and change enablement process? We've talked a lot about what folks are doing. If anybody else could chime in as to what improvements you are planning to make.

What are you doing in your organization to mature your change process? What are the things that that you feel need improvement in your own organizations?

TOPIC: Maturing the Change Management and Change Enablement Process

TJ N.: Jason, it'd be pretty interesting to talk to you just coming from construction background, understanding what you guys are doing. I think we're struggling with the same thing. We don't have a CAB or anything like that. Our struggle is we kind of have two things. We have process improvement, change management, system changes, all that are kind of lumped together into one kind of bucket of intake requests we get. And then we have data and reporting, which is kind of a separate bucket. I feel like data and reporting moves a hell a lot faster. To me it's like you almost need two change groups. One for data and a reporting and one for more long-term change management process improvement projects. We're struggling to figure out what the best way to do that is and what makes the most sense. I don't know if anyone here in the group has opinions on that. But that's where we're at from a construction background. We don't build software, we build buildings.

CHAT:

Drew F.: Having a centralized place you can go to see all the changes that happened at a given point in time.

Janet A.: Start out change management at very high level initially. Visibility & transparency, a lot of grace. We've embraced the 'Crawling with Excellence' motto.

Drew F.: That's a great approach. Start small and grow.

Jennifer J.: Thanks for mentioning the book, Jason. Tracking.

Janet A.: Educate people with levels of information. Start out with a quick reference one-page guide with a Visio & then move more into detailed plan information and don't leave it as a black hole of pain.

Moderator: Drew. What's your opinion?

Drew F.: Well, I don't know that I have an opinion. I can share some of the areas that we're looking to grow into and opportunities for improvement. But one of the things is, as we grow into everything being infrastructure as code, how do we maintain a good level of control so that you don't have simultaneous releases that wind up causing outages and things like that? I'm looking to understand how we can have the right level of control without stifling the rate of change that needs to be present. That's an area that we're interested in learning more about and actively looking at and researching for our infrastructure and existing application layers. All the different services that comprise our offering. We have reasonably mature processes. We have our arms around everything that's released to production, and most things that are put to test this customer-facing. It's been a lot of pain getting to that point so I feel fortunate. We started our journey of really knuckling down on change management probably about 6 years ago.

TOPIC: Change Management in DevOps, CI/CD, and Infrastructure as Code

Moderator: Drew, your topic is up there as long as you mentioned infrastructure as code. We'll go back to discussion around DevOps and continuous improvement. But anybody have other things to chime in with Drew on this particular topic? Are you on the cutting edge, Drew?

Drew F.: Maybe.

Pam M.: It's kind of more of a question maybe for Drew. We have a lot of stuff that we are moving over. We're migrating from on-prem to Cloud where anything going into the Cloud is, of course, being treated from a DevOps workflow perspective. Our objective is to have one end-to-end workflow that includes testing, post-prod validation, etc. The script, the whole thing, front to back, so that we're able to ensure that everything is combined into one singular package. Is that the approach that you guys are taking?

Drew F.: That is a very large topic, Pam. I can say that for some of our more current offerings we have definitely taken that approach. CI/CD, everything is tied to a pipeline. There's as much testing and gatekeeping and automation that's been enabled into that workflow. But unfortunately, as you're introducing products to market and designing new services and everything, there are categories of testing where there are no tools that are available to either plug into the pipeline to do that testing where you have to figure out how to test in a different way. One of the things that you learn by going through the pain, and that's why it's called a journey, is that you need to know what needs to be separate. Breaking things apart, having the one pipeline to rule them all, if you want to call it that, with all the testing in one place, it's not practical. Not practical for everyone, I should say it that way. You might wind up breaking under the weight of all the tests. Like we chose to go the way of having things broken out into their own testing cycles, because sometimes teams need to move faster. When they're able, we want to enable that. We have nightly testing cycles or even hourly testing cycles. It depends on when they're checking in their code and creating pull requests. I don't even know that I answered your question. But yeah, there's a lot there.

Pam M.: Yeah, no, you did. Thank you.

Moderator: Jason, your hand was raised a minute ago. Do you have anything you'd like to add?

Jason B.: Well, we're moving to a infrastructure as code, just as you mentioned Drew. One of the things that I liked about that *Visible Ops* book that I was reading was it talks about kind of this definitive software library where it's the old kind of golden image type of thinking. We're in the place right now from a virtualization standpoint, we're almost 100% virtualized. We're not moving to the Cloud right now. It's not financially feasible for us. We get a lot of agility out of that one. As TJ mentioned we're a construction company, so we use a lot of Cloud services. But from an infrastructure standpoint we're still VMware and on-prem but we're trying to make that one as automated and as reliable as possible. We already have hardened images that are configured inside of VMware. We got templates we can roll out. And now we're looking at I think it's HashiCorp. Getting into something where we can script and get into that whole I request a system and it and it kicks one out and does all the magical automation stuff behind the scenes.

Drew F.: Yeah, Terraform is what it's called.

Jason B.: Exactly. We're doing that kind of stuff, and then have it part of a ticket request that would go in and log a change that something got stood up, and it grabs it, interrogates it, and puts the name, the IP, and all that kind of stuff. You get the tracking stuff like that. That's the direction we're going as well.

Drew F.: One of the challenges that that you run into with that is making sure the right groups have approval, and then have the right to approve that pull request before that pull request is actually Terraform applied to a given region. And then also as each group works somewhat in isolation, how do you have a group that says you're going to kill the load balancer and that's going to stop this cluster from actually operating properly. You need to have an order of operations enforced and Terraform doesn’t really do that. It's just like when you hit the go button it goes, and that's great. It's very fast. It applies those changes in a very reproducible manner. And an item potent, if the object already exists, it doesn't reapply that change. It only applies what's changed, that kind of thing.

Jason B.: So we’ve got to have some discipline before we press go.

Drew F.: Imagine when you're putting change management in for like the first time. One of the struggles we had is getting the individual groups to understand that this one is a dependency for this other one. Group One, when you make your change it affects Group Two. Talk to Group Two before you make your change to make sure that the timing is right. It's like that, but so much faster because it's at the rate of a pull request. And when the maintainer's beat and they just hit go, and it's that's kind of bubble up, and when you start bringing in regulatory requirements like we have everything from ISO 27,001 to SaaS and NIST and all that fun stuff. It's just there's a ton of regulatory requirements that we have to make sure that we're living up to that says, this is our change process and this is how we ensure.

Jason B.: Thanks, that’s great input.

Moderator: Thanks, Drew. I put up the last slide about DevOps, and it sounds like we're kind of talking about that as we speak. Does anybody have anything else to add here, or any additional topics? We are close to the top of the hour, and I want to congratulate us all for getting through this list of questions. Any other additional discussion topics before we adjourn and get you to your next meeting today?

TJ N.: What is your way of letting the business know what IT is actually working on and what's being released? Is there any way that you guys are giving visibility to the business on that type of stuff, or is it kind of a black hole?

Jason B.: I’ll jump in there. TJ, we're putting in a new toolset that will have more visibility from a roadmap perspective and stuff like that. But what we do is a pretty simple thing. We have a spreadsheet that we capture all of the projects that we're working on from a business side. Not the infrastructure and all the core IT stuff, but things that are impacting the business. And inside that spreadsheet we have estimated start dates, end dates, all that kind of stuff, and then we roll that into Power BI. Power BI gives us a graphical Gantt chart that we put right on our portal. Everybody hits the portal. People say internets are not very good. Well, they work really good when that's where you have to go to pay your invoices, where you have to go to enter your time. You make things that you have to go to there and resurface those things right on the front page. You can go to the IT page and scroll down and you can see that chart from Power BI. It shows all the things that we're doing, and we update that spreadsheet every week. I mean it's like a 15 min process, right? It's not full-blown project management type of stuff, we just say, oh, yep, the dates are still the same. Or, it's moved and we put a description as to why it's moved. You can drill down inside that Power BI report, and you can look at the descriptions of what's going on in that. So it removes the need to ask a question to a person quite a bit.

Moderator: Yeah, that's interesting. Thanks for that.

Melanie F.: I really like your approach. Jason. I love that that dashboard method. And we have the ability to do that. Have not had time to implement that yet. But I love that approach. What we do currently is it actually started as a programming request meeting that we have with our COO and our CTO. We just review the requests that are coming in and what our business analysts have come up with. If it's a programming request that our business analyst was able to kind of disqualify, then that's one thing. And then it comes on up to the programming request meeting. In that meeting we review with the COO and the CTO what the request is, and we gain their approval through that request. That way they know what's coming in, what's being requested, and sometimes they'll even shut down the request. It's actually been kind of nice, because sometimes the requests that come up just are not really even within what the organization wants to do. They're like no, let's watch that one for right now, because we've got a bigger plan coming to fruition. That's going to be handled through something else that’s coming down the line. Of course, if it gets through, it gets their approval, then of course it goes into programming or development. And then for goes on to the Change Advisory Board.

Moderator: Thanks, Melanie. I’ve seen in the chat that a few have already asked to connect with each other offline. If you'd like to connect with somebody else on the session, throw that in the chat and we will do our best to make that happen and connect you together for further discussion. This has been a great session, and you guys make it easy for me because you have a lot to share. You're here to get information from each other, and that's the whole name of the game. Thank you for joining us today. We'll see you again on another NOREX event. Take care, everybody.

End of discussion

Products / Vendors / Technologies shared in this Roundtable 55:

CAB
Change Advisory Board
CI/CD
CISO
DevOps
Evolven
Feature flagging
HashiCorp
Infrastructure as Code
Jira
LaunchDarkly
PMO
Power BI
Project Management
Security
ServiceNow
Terraform
Tripwire

Appendix A: All Poll Results

Change Advisory Board Meeting Frequency

How often does your CAB meet?