



SCM Activation Success Factors – *The Ten Factor Framework*

Sherry Thorpe, RN BSN, Senior Consultant, Eclipsys Practice, Vitalize Consulting Solutions, Inc.

Introduction

Activation is the culminating event of the Electronic Medical Record (EMR) project endeavor. It is the time the system goes live and the most memorable event to the end-users. It is often their measurement for how successful the project team performed. The benefits of implementing EMR's have been realized through reduction in medication errors, accessibility and availability of patient data, productivity improvements through electronic documentation, and improved continuity of patient care. These benefits can be more quickly realized with a successful implementation.

Problem Statement

Activation marks the point in the implementation process where all the components of the project must come together. It is also at the end of a marathon of events when project teams get bogged down with meeting deadlines, resolving issues, freezing code, and preparing the application for the move to production. It is at this crucial point that activation readiness assessment is usually performed, or worse – activation readiness is assumed, based on completion of the project task without an independent activation plan.

Success Factors

There are many factors which can contribute to a successful implementation. The factors below are provided in a checklist format for ease of use.

1. Activation planning begins when the project begins and parallels all activities through implementation
2. Budget for activation
3. Involve end-users whenever possible
4. Anticipate and mitigate for downtime at all points of failure
5. Test thoroughly – then test again at the point of expected use
6. Communication
7. Training
8. Establish a clinical activation team
9. Establish a command center
10. Plan for post go-live support

Factor 1: Activation planning begins when the project begins

and parallels all activities up through implementation. Once the project has been initiated to implement an EMR, the cost and complexity to go back and start again increase as the work progresses. Keep asking the question – “how does this impact activation?” as the project moves forward and decisions are made.

Considerations	Red Flag Questions – <i>If the answers to the questions are “no” or ambiguous, this should raise the flag as a risk to activation and should be mitigated prior to proceeding.</i>	
Stakeholders – <i>Avoid “I wasn’t involved”</i>	<ol style="list-style-type: none"> 1. Have you identified a stakeholder from each area that will be impacted by the implementation? 2. Will the stakeholder take an active role? 3. Do your stakeholders embrace the vision? 4. Do the stakeholders have decision making power? 5. Who is driving the vision? 	
Adoption – <i>Avoid “I can’t use this without undesirable effects” (Tightly coupled with workflow)</i>	<ol style="list-style-type: none"> 1. Is the culture ready – do the institution’s core values align to implementing an EMR? 2. Have the stakeholders had the opportunity to voice concerns and barriers to success? 3. Is there a solution to identified barriers? 4. Will the use of the EMR be mandatory? 5. Is there a clear ROI for all practitioners? 6. Do you have measurable benchmarks? 7. Do you have champions for each area that will be impacted? 	
Solution Selection <i>Avoid rework</i>	<ol style="list-style-type: none"> 1. Does the solution you have selected align to the organization’s strategic vision? 2. Does the vendor have a proven track record in a similar environment? 3. Did the vendor selection process include end-users? 4. Did the organization identify workflow scenarios to be enacted during product demonstrations? 5. Does the vendor have the resources to support project initiatives on on-going sustaining and growth activities? 	
Infrastructure <i>Minimize performance and user interface issues</i>	<ol style="list-style-type: none"> 6. Do you know that you will have the infrastructure to support an EMR in terms of speed, reliability, maintainability, and expansion? 7. Do you have business continuity and hardware agreements in place in the event of scheduled, unscheduled, and/or sustained downtime? 8. Did you conduct your workflow analysis prior to selecting user interface hardware? <i>(E.g., will the device support maintaining eye contact with a patient if performing an admission assessment? Do your physicians demand access to patient data via smart phones or other mobile devices?)</i> 9. Do you have the resources to readily support hardware issues during both activation and production modes? 10. Will the hardware require reconfiguring existing work areas? 11. If using mobile devices, do they have the ability to be locked down and wiped clean in the event they have been misappropriated? 12. If anticipating wireless devices, has plant operations been included 	

	to define areas which may present barriers to connectivity such as lead lined walls?	
	13. Does your end-user device comply with infection control requirements? (E.g. Can your device safely be used in an isolation room?)	
	14. Does the hardware have easily identifiable markings to assist with end-user troubleshooting? (E.g. Workstation names and IP addresses)	
	15. Will the hardware be usable without additional end-user training? (E.g. If the implementation calls for mobile devices such as tablets, is your workforce prepared to use the technology?)	
Security <i>Avoid breach of privacy, fines, and penalties</i>	1. Do you have an audit process and resources established to track and remediate inappropriate chart access?	
	2. Do you have an approval process to govern who can have access and to what degree?	
	3. Do you have a process to remove or change access for users who have been terminated, changed jobs, or resigned?	
	4. Do you have business associate agreements in place?	
	5. Do you have a process for external access control?	
	6. Do you have a solution for secure communication of patient data?	
	7. Does all output have at least two patient identifiers?	
Environment <i>Avoid unnecessary work of use</i>	8. Do you have enough resources to navigate the geography of the activation area?	
	9. Do the support resources have access to the areas they are expected to support – especially locked areas such as mother-baby, critical care units, and pediatrics?	
	10. Are there sufficient devices or workstations available for both physicians, nursing, and ancillary staff?	
	11. Does the placement of devices/workstations minimize foot traffic?	
	12. Are the printers located in a secure area – especially those to be used for printing prescriptions?	
	13. Are printers strategically located to support workflow?	

Factor 2: Involve end-users whenever possible

Involving the end-users as much as possible throughout the life of the project will enhance the odds of a successful activation. This will allow them to gain more expertise with the intended workflow and application and provides you with a team of super-users. Be sure to incorporate them into your test plan design and execution to prevent your expert knowledge to bias outcomes. They will be much more attuned to gaps between the solution and their workflow. **To be successful, the system has to be usable.** Consider incentives to get them involved.

Considerations	Red Flag Questions – <i>If the answers to the questions are “no” or ambiguous, this should raise the flag as a risk to activation and should be mitigated prior to proceeding.</i>	
<p>Adoption <i>Your end-users are your litmus test for success. Use them throughout the process as a gauge for usability.</i></p>	<p>1. Have you involved end-users throughout the process? <i>(The earlier you can involve the end-users, the better. If your end-users have shared and visible accountability for project tasks, they will be compelled to strive for a flawless implementation. Consider marketing the project team as a blended team of IT and clinical associates.)</i></p>	
	<p>2. Do you have resources dedicated to liaison between end-users and IT? <i>(It is crucial to have individuals who have shared commitment to those who design and those who construct. The best architectural blue-print will not magically transform into a dream house without someone who can interpret the design and translate them into work instructions and mitigate construction issues and manage change.)</i></p>	
	<p>3. Do you regularly meet with end-users to review progress, problems, and plans? <i>If the answer is no – STOP – do not do any more work until you catch them up!</i></p>	
	<p>4. Do you incorporate end-users into stakeholder presentations? <i>(Look for opportunities to allow the end-users to participate in stakeholder and workgroup presentations. Consider co-chairing events to allow associates to witness collaboration.)</i></p>	
	<p>5. Do you think your end-users are satisfied? <i>(If the answer is “no” – you’re in trouble and need a get well plan to improve their perception.)</i></p>	
	<p>6. Do you have a process to connect the end-users who have been involved in the project with their colleagues? <i>(Be wary of limiting your end-user involvement to only those with direct project involvement. Look for opportunities to be on the ground with their peers to observe the interactions and get a feel for how your efforts are being portrayed. Watch for their peer’s reactions. Always be on the lookout for the informal decision makers.)</i></p>	
<p>Workflow <i>Minimize impact to patient care</i></p>	<p>1. Have you assessed every practitioner’s role workflow in every area? <i>(Do not assume all nursing units are equal; do not assume physician workflows are equal; do not assume one shadowing experience reveals the workflow; do not assume in-patient and out-patient processes work the same way; do not assume all shifts operate the same way. Involve as many sources as possible to validate and provide detail to the workflow.)</i></p>	
	<p>2. Did you validate workflows with multiple end-users? <i>Not all users are equal either.</i></p>	
	<p>3. Do have a document which identifies and addressed all points of impact to existing workflow? <i>(This will make creating test plans much easier and provide a foundation for training materials.)</i></p>	
	<p>4. Have you identified level of risk, documented resolution, and communicated gaps in the workflow to affected users? <i>Surprises are great for birthdays, not so great for activation.</i></p>	
	<p>5. Do you have reviewed and received end-user buy-in for future state workflow?</p>	
<p>Reporting</p>	<p>1. Have you all identified and validated all current state reporting</p>	

<i>Don't underestimate the crippling effect lack of data can have</i>	requirements with end-users? <i>(In this context, end-users include areas such as risk management, quality, research teams, executive staff, physician offices, and reporting agencies.)</i>	
	2. Do you have specifications for future state reporting requirements?	
	3. Have you conducted a gap analysis between current and future state and garnered input from all impacted areas?	
	4. Do you have a plan to provide end-user access to historical data?	
	5. Do you have a plan to blend data from current and future state data repositories?	
Risk identification <i>Listen closely...</i>	6. Do you provide a forum for end-users to voice resistance to workflow or application decisions? <i>(Resistance is often a flag that something is not going to work. Without expert knowledge, users will often manifest their unease in the form of resistance. Provide enough latitude to differentiate between resistance for resistance sake and resistance with due cause.)</i>	

Factor 3: Anticipate and mitigate for downtime at all points of failure

Do not be tempted to rely on fate or take odds on a downtime occurring during activation. If you do not address downtime prior to activation, it will surely haunt you when it happens, because it will happen. Make sure everyone is prepared with adequate supplies, has access to available downtime systems, emergency equipment is readily available, and are thoroughly familiar with downtime policies and procedures.

Factor 4: Test thoroughly, and then test again at the point of use

There are volumes written on how to develop test plans and the importance of testing as a critical factor of success. So do all that and then test again at the point of use. The last things you want to deal with are access issues during activation.

Considerations	Red Flag Questions – <i>If the answers to the questions are “no” or ambiguous, this should raise the flag as a risk to activation and should be mitigated prior to proceeding.</i>	
Connectivity <i>Do not invite connection issues into your activation</i>	1. Have you tested all wireless devices at the point of use?	
	2. If activation crosses multiple areas, have you tested the devices by walking all potential routes including stairwells and elevators?	
	3. Have you verified workstations are able to print to printers if needed?	
	4. Have you verified prescriptions are printed to the appropriate printer?	
HIPPA <i>Make sure your patients' data are protected</i>	1. Have you verified patient information is visually protected?	
	2. Have you verified all printers are in secure areas?	
	3. Have you verified users restricted to logon locations retrieved the appropriate patient list?	
Verify the build <i>Avoid activation aggravation</i>	1. Have you verified you can launch the application?	
	2. Have you patient criteria based lists are retrieving properly at the workstation level?	
	3. Have you verified all security rights are working appropriately?	
	4. Have you verified all users can login?	
	5. Have verified all users credentials and roles are accurate?	
End-user Devices <i>Avoid unnecessary frustration</i>	1. Are your devices clearly labeled with identifiers to aid end-users in reporting issues?	
	2. Have all devices been tested?	
	3. Are all devices properly charged and plugged into appropriate receptacle? (Is there sufficient space and outlets – generator backup preferred – to accommodate the devices?)	

Factor 5: Budget for activation

Undertaking an EMR implementation is a costly endeavor. Since activation occurs after the bulk of the visible “work” effort, there is a tendency to think there is minimal cost involved. Don’t skimp on the activation as the cost of recovery is likely to be the larger expense.

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Staffing <i>Do not underestimate the productivity hit for migrating to a new system</i>	1. Do you have extra clinical staff assigned to cover activation?	
	2. Do you have a budget for extra support staff to be on the ground during activation?	
	3. Do you have extra support staff in place to expedite trouble calls?	
	4. Did your clinical areas budget for productivity loss during activation and post-activation?	
	5. Is there a budget for end-user participation in project initiatives?	
	6. Is there a budget for incentives?	
Training <i>The more prepared your users are, the more successful you will be</i>	1. Is there an adequate training budget for end-users, technical staff, super-users, and trainers? <i>(Be sure to provide patient care areas at least a year’s advance notice to meet the budget planning timelines.)</i>	
	2. Is there adequate budget for training supplies? <i>(Consider having training materials such as badge cards at activation.)</i>	

Factor 6: Communication

Communication is paramount to any project. It represents its own challenge in healthcare because the intended recipients are already inundated with requisite information, such as: changing or emerging regulations, organizational changes, in-services, credentialing, journals, and practice changes.

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Mode <i>(Even in today’s world, people do not always check email!)</i>	1. Do you feel like you are reaching your intended audience? <i>(How do you know?)</i>	
	2. Do you use multiple modes of communication? <i>(i.e., email, newsletters, person-to-person, webinars, eMeetings, hardcopy mailings, brochures, flyers, web blogs, etc. With the rising cost of fuel, eMeeting tools such as WebEx are very useful for maintaining personal contact when dealing with multiple locations.)</i>	
	3. Do you have marketing involved with your communication initiatives?	
	4. Have you branded your project? <i>(Consider a naming / branding contest.)</i>	
Audience <i>Establish and maintain trust from the onset</i>	1. Do you communicate with your stakeholders at least once per quarter with the project team, end-users, and physician liaison?	
	2. Do you round regularly on the area and/or the providers affected by activation? <i>(Be sensitive to the vibe of your audience – sometimes it’s better to just acknowledge they are busy and defer your visit for a less busy time.)</i>	
	3. Do all functional areas of the project team regularly meet to ensure everyone remains informed to project status and risk registry?	
	4. Do your stakeholders show up for meetings?	
	5. Does your physician liaison have ownership in the communication process?	

Factor 7: Training

Training is where you will experience the equivalent of a dry run. The volume and diversity of end-users will likely shake out any anomalies that were overlooked during testing. The beauty of training lies in the inexperienced users who will navigate and use the system in the most illogical manner possible. Be thankful for any issues that arise, because you have been given the gift to address them before activation.

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Training Environment <i>Avoid having the user conceptualize the end result</i>	<ol style="list-style-type: none"> 1. Does your training environment mimic your production environment? 2. Is your training specific to user roles? 3. Do you have workflow based training? 4. Do you have training accounts specific to user roles? 5. Do you have training stations that can mimic location sensitive training? 6. Do you have interfaces so users will be able to see how ADTs, results, etc. appear? 7. Do you have separate lab time for user paced hands-on training? 8. Do your users have access to the training environment from their work area? 9. Do your users have remote access to the training environment? 	
Training <i>Have a mechanism in place to judge the readiness of your users and effectiveness of their training</i>	<ol style="list-style-type: none"> 1. Do your trainers have competency sign-off before they conduct training classes? 2. Do end-users have to attend training prior to being given a sign-on? 3. Do you have training materials readily accessible to end-users such as web accessible simulations, cheat sheets, badge cards, impact sheets, etc to help refresh their memory? 4. Do you train how to access online help? 5. Do you train how to get assistance? 6. Do you plan on conducting advanced user or super-user classes? 7. Do you have a method of tracking who has/hasn't been trained? 8. Is training part of new-hire orientation? 9. Do you have designated physician trainers? 10. Are you able to go the physicians and train one on one? Accommodate remote locations? 11. Do you have a plan to train visiting care providers? 12. Do you have annual competencies for care providers? 	

Factor 8: Establish a clinical activation team

Prior to activation, consider establishing a clinical activation team comprised of your super-users, a team lead, and any additional clinical staff that may be needed, i.e. unit clerks. This team will become your pipeline and will share in the success of the activation. Typical responsibilities include communication, management of training materials, downtime preparation, facilitating orders reconciliation, chart preparation, and staff support. Other duties may include back loading orders, and facilitating interdepartmental communication.

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Readiness <i>Being IT ready does not mean being clinically ready</i>	<ol style="list-style-type: none"> 13. Do you have a process and timeline to capture and access active, pending, or held orders at time of activation? 14. If migrating to a new system, do you a process and timeline for shutting off order entry? 15. Do you have a process and timeline for back-entering future orders 	

	into SCM? (<i>i.e., order placed yesterday to be active for 5 days and activation is tomorrow – how will the next 4 days of orders get re-entered?</i>)	
	16. Do you have a process for canceling, if necessary, any previous orders in the legacy system?	
	17. Do you have a process and support structure for locating legacy data?	
	18. If there will be any downtime, do you have a mechanism for transmitting (manual or electronic) STAT or time critical orders? Results?	
	19. If migrating to a new system for clinical documentation, do you have a process to retrieve historical data?	
	20. Do you have a process to prevent inadvertent entry of data into the legacy system?	
	21. Do you have a process to allow specific users to have view rights to legacy system?	
	22. If you are doing clinical documentation activation from paper charts – do you have a process and team to build the charts?	
	23. Do you have resources to addresses practice related questions that usually start with “Do I have to...?”, “How often do I...?”, and “Can I just...?”	
	24. If you are doing an activation for new functionality within an existing SCM environment that will require an SCM downtime: <ul style="list-style-type: none"> ○ Do you have access to charted data? (Particularly vital signs and I/Os) ○ Do you have access to results? ○ Do you have access to documents History and Physicals and consultations? ○ Do you have access to radiology studies? ○ Do you have access to ECGs? 	
	25. Do you have a resource/process to prioritize end-user issues?	
	26. Are you utilizing your super-users for activation support with a resource identified to assist with any super-user performance concerns? (<i>For those who like giving guidance a bit too much or not at all.</i>)	

Factor 9: Establish a command center

Establishing a command center with a central number going to multiple lines can greatly minimize the frustration of reporting issues. Key personnel are co-located enabling collaboration on any complex problems that arise.

Considerations	Red Flag Questions – <i>If the answers to the questions are “no” or ambiguous, this should raise the flag as a risk to activation and should be mitigated prior to proceeding.</i>
<p>Centralized communication <i>Make things easy for everyone to communicate during activation</i></p>	<ol style="list-style-type: none"> 1. Do you have a central resource to call activation start and activation all clear? 2. Do your users have one number or contact for assistance? (<i>Keep things easy for yourself, give the users one number versus personal cell phones, pagers, etc. Use a different number and process than your daily help desk line so they don't get mixed into the normal work queue. Reserve the occasion to do so only when warranted so people can get through.</i>) 3. Does your technical team have one number or contact for assistance? (<i>Your technical team will be busy – don't create work by having them lose time tracking people down.</i>) 4. Do you a process to triage incoming calls? (<i>Consider setting priorities for tracking incoming calls and creating criteria to assist call center personnel in directing calls.</i>)

	5. Do you have a STAT team in place to receive escalated calls to address situations that may have implications for patient safety?	
	6. Do you plan on issuing regular status reports from a central source for all news – good, bad, and ugly until activation is declared complete?	
	7. Do you know who calls the activation complete and how to reach them? <i>(Consider having both a clinical and IT representative make a joint decision.)</i>	
Issue Tracking	1. Do you have centralized issue tracking and a feedback process?	
	2. If issues beget configuration changes, do you have an expeditious change management process in place?	

Factor 10: Plan for post go-live support

Considerations	Red Flag Questions – <i>If the answers to the questions are “no” or ambiguous, this should raise the flag as a risk to activation and should be mitigated prior to proceeding.</i>	
The Day After	1. Do you have additional coverage post go-live for at least two weeks to cover users who may have been on vacation or on a different shift rotation?	
	2. Do you have a plan and resources for sustaining support after activation?	
	3. Do you have after hours support?	
	4. Do you a process to triage incoming calls? <i>(Consider setting priority tracking for incoming calls and creating criteria to assist call center personnel in directing calls.)</i>	
	5. In the event your activation did not go well, do you have relief personnel ready? Do you have a hand-off process?	
	6. Do you plan on issuing regular status reports from a central source for all news – good, bad, and ugly?	
Issue Tracking	1. Do you have a process to address issues that arose but were not resolved during activation?	
Change Management	1. Do you have a change management process to prioritize and approve the change requests that are inevitable?	
	2. Do you have a fast track process for Joint Commission or other regulatory, risk management, or other critical requests?	
Prepare for the Next Event	1. Do you have an appointment preset to analyze what were the strengths, weaknesses, opportunities, and threats to the activation process?	
	2. Did you schedule your next activation far enough out to allow for issues to be resolved and for your team to be well rested?	

Conclusion

Addressing the ten factors enumerated above and giving them thoughtful consideration throughout the process will help mitigate and flush out issues and help ensure a successful implementation. Allow the 10 Factors Framework to guide your organization to reaping the benefits in a more structured and well orchestrated manner. For additional information, please contact a Vitalize representative at 610-444-1233 or email us at vcs@getvitalized.com