Strategic Technology Planning Frequently Asked Questions (STP FAQs)

Where do we start?
Start where you are today. If you have somewhat of a plan, pull it out and blow the dust off. Use the information from this webinar to formalize and/or refine the process and deliverable.

If you do not have an existing plan or process, begin in your area of expertise – technical, clinical, or business/financial. Ensure that you have confidence in your data source (e.g. CMMS, ERP, etc.). Define the aspects that will be scored in your area and whether you will use Yes/No (binary) or numerical values for scoring.

In either case, identify your partners (collaborators) in the other areas and keep it simple. As you and your organization become more comfortable with the process, you can make the it more sophisticated. Access resources inside and outside of your organization that have expertise to help you jumpstart your plan and/or take it to the next level.

We are having a hard time obtaining equipment purchase dates to determine the age of equipment at our facility. In that scenario, what factors would you recommend to determine the age of the equipment when working on technology planning?
Equipment chronological age (i.e. manufacture date) can be challenging to determine if the equipment is not purchased as new (i.e. used or remanufactured) or if it is initially rented or leased. Determining equipment age can also be challenging if CMMS inventory records are not entered consistently and maintained.

Depending upon the amount of staff time you have available, one option is to contact manufacturers and request manufacture dates based upon serial numbers. This is a very manual task with potentially limited value. HTM staff frequently know the general "technological age" of the asset – new, mainstream, obsolete. It may be more efficient and effective, to turn your focus to determining EOM and EOS status. If these flags are "raised" then the "chronological age" may not be important to your strategic technology planning recommendations or prioritization.

However, if EOM and/or EOS flags are not "raised," then it is recommended that you prioritize which equipment types will be researched. This may be a task you decide to outsource so you and your team can remain focused on critical operations.

Understanding the deckplate (frontline) personnel have first-hand information and experience with equipment, how should we get them involved in Strategic Planning? At what level and how involved should they be?
Deckplate (or frontline) personnel from all areas – technical, clinical, and business/financial – should absolutely be involved in the strategic technology planning process. As managers, we need to demonstrate trust in our staff's perspectives so they will engage.

We can create committees, policies, and opportunities within our departments as a means for our frontline staff to contribute. Most importantly, insist on top quality documentation relative the medical devices and systems in all data sources (i.e. CMMS, ERP, Financial Asset Mgmt., etc.). Then provide specific examples of how that data is used to inform the strategic technology plan. Validate the data with your team, especially senior members of the team. As you become more confident in the data and more comfortable with the process, consider assigning the assessment of specific equipment types to the senior members of your team. The management team can be responsible for integrating the technical, clinical, and business/financial components, and then collaborating across functionally to prioritize the plan.

If your organization has Value Analysis committees, these may also opportunities for more experienced (senior) members of your frontline staff as well as members of the management team to contribute to the strategic technology planning process.

Please discuss the intersection of strategic capital planning and operational budget planning.
The priorities identified by the strategic technology plan (capital plan) will most likely require a formal business case to document the justifications leading to approval and funding. In addition to the capital expenditure details required for procurement, a multi-year operational forecast should be part of the business case. The operational forecast will include all expenses (labor, training, supplies, maintenance, etc.) required to maintain the new asset for 3-10 years depending upon the specific technology. For example, endoscopes might be a 3-year forecast whereas an imaging system or sterilizer will be 10+ years.

Very few organizations do this well; although, many are working on it. Frequently, the operational forecast is included in the business case but not executed. This is an organizational culture challenge that can and should be considered during the strategic technology planning process.

Are there any benchmarks for a healthy average age of fleet?
The AHA 'bluebook' is a frequently used reference for useful life benchmarks. This reference has traditionally relied on depreciation schedules rather than maintenance histories but is a good starting point.

Some larger medical device service organizations have expended significant effort into their CMMS data to increase completeness, consistency, and confidence. As such, they can analyze their data to determine useful life within their client base and/or across their health system enterprise.

Smaller organizations can do the same analysis if they too have confidence in their CMMS data. These benchmarks will more likely be specific to the individual client or health system due to the smaller sample size. This is specificity may be an advantage because it accounts for the specific use patterns and clinical protocol norms within the client or health system.

For cost of service ratio, what value do you use? List price, discounted/GPO price, depreciated value, or …?
Be consistent. Pick the data value that is most reliable within your organization, then be consistent with the calculation. Confidence in the chosen data point is critical.

Remember that COSR is a ratio and not an absolute number. COSR is one metric used to make strategic technology planning decisions, not the only metric.

A few additional thoughts on COSR:

- Calculation of the COSR across the entire inventory has little value. Why? Because not every "entire inventory" includes a similar mix of medical imaging, laboratory, and biomedical equipment.
- Calculation at the equipment category level – medical imaging, laboratory, and biomedical equipment – can help set initial prioritization. For example: If one of these areas is higher than industry benchmarks, it would be worth investigating deeper into the maintenance plan and costs to determine what if any impact replacement or upgrade would have on the COSR.
- The process outlined in the webinar assumes COSR calculation for equipment types (e.g. defibrillators, CT scanners, hematology analyzers) and specific make/models (as necessary).

What CMMS should I use?
The CMMS products available today are significantly better than those of decades past. Most, if not all, leverage advanced database and analytical technologies. The AAMI publication – *Computerized Maintenance Management Systems for Healthcare Technology Management (3rd edition)* – is an excellent resource for expert guidance on the selection of a CMMS.

Strategic technology planning is agnostic to CMMS products. The quality of the data within the CMMS will determine the quality of your strategic technology plan.

Strategies for replacing large families of equipment across an enterprise and within regions... i.e. all defibrillators, end of life.

Within this webinar, I use the term "fleet" to refer to large families of equipment. In most cases, the fleets are of the same or similar manufacturer and model. However, that's not always the case. Therefore, when defining your fleet management (replacement) strategy, it's important to clarify your organization's position on standardization.

There are two general approaches (strategies) for fleet management:

1. Replace the fleet in its entirety all at once
2. Replace the fleet in defined phases over a period

Smaller organizations will frequently replace a fleet all at once to maintain the organization's equipment standards and avoid user confusion and/or compatibility issues with supplies.

Large organizations will frequently find it necessary to replace a fleet in phases. For example, a single region will replace its entire fleet all at once while the other regions wait for their prescribed (scheduled) phase. Using this approach, the large organization preserves standardization within all regions but not necessarily between regions (e.g. conversion to new standard). This approach will require the supply chain management team to coordinate any variances in supplies for the affected region(s). Similarly, clinical staff training will be critical especially if clinical staff move between regions.

These factors should be considered throughout the strategic technology planning effort.

Are there specialized tools I can/should be using?

Yes, as discussed during the webinar, it is important to have robust CMMS, ERP and Financial systems to ensure confidence in the data behind the strategic technology plan.

Many healthcare organizations also have Financial tools for managing all their capital planning, budgeting, and execution for real estate, facilities construction/renovation, technology, and medical equipment. These tools can enable the alignment and coordination with other strategic efforts we discussed during the webinar.

How often should I re-evaluate the plan?

The refresh frequency of your strategic technology plan is somewhat dependent upon your organizational culture. Who if anyone has responsibility for the strategic technology plan? What level of authority and resourcing is allocated to the strategic technology planning team? Once the plan is established, it should be updated as decisions are made and implemented.

Some organizations will create a plan across all technologies. In this case, re-baselining every 3 years is probably good.

Other organizations will rotate through clinical areas (radiology, cardiology, surgery) or by asset type (fleet, system, stand-alone). I recommend creating 3-4 groupings (maximum) so that each group is re-baselined every 3-4 years.

What is the relationship between the CMMS and the ERP for HTM departments?

The ERP (enterprise resource planning) system is the core data/information system for Supply Chain Management (SCM) departments. The ERP system includes the list of supply items routinely purchased by the healthcare delivery organization (item master) along with the software programs for procurement (e.g. requisitions, purchase orders), and various accounting programs (e.g. receivables, payables). When completing a strategic technology plan, the ERP is the source of data for the supplies used with the equipment items under assessment (e.g. cables, disposables). This data

provides greater insight to the total cost of ownership of each equipment asset and may provide important information for STP recommendations and/or prioritization. Additionally, the CMMS may be integrated with the ERP to facilitate parts and supply procurement by the HTM department for planned and corrective maintenance activities.

Do you have a formula to calculate the Technical Score?
Yes, **Carol Davis-Smith & Associates, LLC** uses the metrics described in the presentation as standard data points, then customizes the measures to the specific client (e.g. additional data points, weights). Please contact us to learn how we can help you establish your strategic technology planning program (Carol@CDSAssoc.com; http://cdsassoc.com/).

Some healthcare delivery organizations have defined their own data points and calculations to determine the individual technical, clinical, and business (financial) scores. These individual scores are then used to determine the Composite Score through a variety of means ranging from simple summations to complex mathematical calculations.

Healthcare deliver organizations are strongly encouraged to avoid making the mathematics more complicated than necessary. Remember, there is no "right" number. The scores should be descriptive as opposed to definitive.

Are you aware of any resources other than making calls to the manufacturer to obtain End of Support letters?
To my knowledge, there is no centralized repository of end-of-life documentation (i.e. End of Manufacturing, End of Service/Parts). However, some manufacturers have created websites where customers may retrieve at least some of this information. Older equipment items (more than 10 years old) may require contacting the manufacturer for archival research.

During major acquisitions of devices that have associated expendable items such as infusion pumps, do you recommend a strategic plan to exhaust old supplies and suspend reorder and also have enough supply of new supplies on hand in departments and the warehouse on go live.
Yes, this is a cost-efficient approach when it's feasible. Unfortunately, equipment assets frequently have proprietary supplies that are not compatible with the replacement equipment. In such cases, these sort of fleet assets are often replaced in waves (phases) so incompatible supplies could be reallocated to other locations that have not yet converted to the new equipment.

Do you feel that Initial Outfitting and Transition companies bring any value to these early planning sessions, based on their experience in equipment planning and acquisition?
In my experience, Initial Outfitting and Transition teams are integral to construction projects. As such, it is my opinion that the Strategic Technology Plan should inform these teams and their equipment plans by providing a forecast of assets that may (or may not) be reused within an active or forecasted construction project.

Conversely, the Facility Master Plan should inform the strategic technology plan by identifying facility construction, renovation, and/or repurposing for the next 5+ years. When establishing or updating the strategic technology program, active construction project equipment plans are valuable inputs as they identify equipment assets not yet recorded in the CMMS.

What best practices have you seen in coordination of equipment purchased with IT and construction budgets and planning and work.
More than ever, it is important to include IT input to the strategic technology plan. For example, IT and HTM frequently work together to plan, implement, and support medical device integrations. While HTM may be able to forecast any changes required by the medical devices, various IT functions may need to be consulted for changes to network and/or data architecture requirements. The same would be true for cybersecurity. Leading practices include well documented

project plans as well as well documented installations of networked medical devices. Having a strong working relationship between HTM and IT is key to many initiatives including strategic technology planning.

The same principles apply to construction projects. Having strong working relationships with Design & Construction project teams, especially the equipment planners, leads to better asset management and financial budgeting coordination. Well documented Facility Master Plans, future project forecasts, and active project plans will enhance the strategic technology plan with more accurate prioritization. Another leading practice is ensuring Design & Construction teams, again especially equipment planners, have visibility to healthcare delivery organization vendor and product standards.