THOUGHTS ON INTEGRATING HR, SCHEDULING, AND FINANCE/PAYROLL SYSTEMS

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Human resources, staff scheduling, and payroll are a group of highly interdependent business functions and benefit from consideration of the end-to-end employee experience. In many instances (given considerations of functionality), more than one system is required along with the appropriate interfaces and business rules, to deliver that integrated journey.

Each system contains functionality through a modular arrangement wherein a system vendor offers specific modules containing a group of related functionalities (i.e., Scheduling, Time & Attendance, Recruitment & Applicant Tracking, Benefits Administration, Budgeting, Payroll). Some modules may cross multiple streams, for example a Reporting & Analytics module to assist with providing management information to support decisions, or a Self Service module which allows employees or managers to view personal information and/or submit requests.

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Human Resources
- Recruitment
- Employee Demographics
- Position/Job Management
- Compensation Management
- Benefits Administration
- Performance Evaluation
- Skills, Licenses & Training

Employee Scheduling
- Unit Master Rotations
- Employee Schedules
- Time & Attendance
- Leaves & Absences
- Vacation Planning
- Availability & Shift Swaps

Finance & Payroll
- Pay Slips
- Tax Withholding
- Leave Accruals
- Allowances
- Cost Centres
- Budget Reports

Figure A: Typical Scope of HR, Scheduling and Finance/Payroll Responsibilities

From a workforce management perspective, the journey initiates with accurate employee information and position control being held in a Human Resources Information System (HRIS). The employee and position data then links into a scheduling module or are interfaced to a staff scheduling system containing real-time scheduling and deployment information. With the right mix of schedule planning, employee scheduling business practices, and validation with audit controls, clean time driven by accurate employee data flows through to the financial system where payroll is processed as a by-product of an optimized staff scheduling environment, and actual spending is recorded for budget tracking purposes.

Data from the scheduling component is key to enable HR, Finance and Clinical leaders to work as a trinity with a constant eye to budget and staffing levels not just in real-time, but with respect to planning. That information is required to inform effective workforce planning and deployment decisions by management as many vacancies, most vacation, and a substantial portion of other leaves types are predictable in nature. Access to clean historical leave and workload data for units and programs, along with employee demographics and turnover rates help to stabilize unit core and relief workforces. Analytics can be generated from scheduling and deployment information, and having the right mix can inform the HR recruitment and employee skill development required to meet the future needs of the organization.

Defining the Scope of a System Implementation Project

The selection of any system designed to drive efficiencies in business processes and practices must first consider the strategic direction of the organization – for a healthcare operation that would include such factors as patient population changes, the service delivery focus of the organization, and any anticipated future consolidation activities. The flexibility and ability of any purchased system to accommodate anticipated future changes is paramount due to the significant investment required to support and ensure a successful implementation. Specific modules for the system need to be selected based on the overall needs of the organization and considering cost-benefit analysis of an integrated system vs. specialized systems which may have greater functionality (for example, a standalone learning management system, recruitment and applicant tracking system, or existing staff scheduling system).

Any project which involves implementation of enabling technologies must also invest upfront to ensure consistent and standardized business processes and practices are designed in advance and drive configuration of the technology. Collaborative business process design involving key stakeholders is foundational to ensuring a broad base of commitment towards new ways of working. Organizations also must not underestimate the degree of change management support required for corporate services, leaders, and front line employees in order for users to be successful in the transition to their new ways of working. An insufficient investment in change management invariably results in an organization failing to achieve the intended benefits and/or investing much more to address problems after-the-fact – and in many cases results in a partial implementation where some areas are removed from the project scope as the system is unable to meet their needs.

Accurate Data Requires Consistent Processes

Business systems are put in place to address a need for accurate information and enhanced reporting. However, the simple fact is that having a system is no guarantee of accuracy. Business processes and procedures drive the use of the system and variable practices create unreliable data. Frequently, a system is implemented with insufficient consideration towards the business processes used or with an intent that the organization change practices to accommodate the system design. The result is that the system does not meet operational needs and/or automates poor practice that may exist. This increases the risk of a partial implementation with workarounds that do not allow business information to be captured for all areas, impeding efforts to provide reporting, analytics, and decision support.

Workforce Edge was founded to address issues of unsuccessful system implementations. Our collaborative business process design process has been applied at healthcare organizations across Canada and internationally to develop strong buy-in and commitment to new ways of working at the front line. Standardized business processes support the provision of clear and detailed business requirements to system vendors, reducing the confusion and rework (and associated cost) that often surfaces during the testing phase, or in some unfortunate cases, post-implementation. Therefore, making an investment in creating effective business processes and procedures is necessary to enable the intended benefits of a system implementation.

Benefits Realization to Fund Investment

The cost drivers of the organization must be considered when planning for investments in system projects and scheduling ecosystem improvements, as health systems aim to sustain service delivery and respond to quality agendas of Ministries. Spending on labour typically accounts for 70% or more of a healthcare budget. Defining the business case to enable an integrated journey from HR through to scheduling and payroll requires a tightly defined project scope. Although benefits such as employee engagement, quality improvement, and enabling of care delivery are key – *hard quantitative benefits need to be realized to justify a capital project*. A system implementation project should include investment in support for the business of the healthcare organization to drive effective configuration on behalf of the organization, and to represent the business needs to system vendors.

When identifying quantitative benefits, there must be a strong focus on process and schedule optimization as they are the source of achievable financial savings – and these activities are not dependent on having any systems in place. Immediate benefits can be obtained from the implementation of optimized schedules and a relief workforce strategy, control of positions matched to care model decisions and budgets, and streamlining of business processes to reduce workload for the employee scheduling function, creating a situation where early benefits are used to fund later investments.

That said, a focus on financial benefits should not be at the expense of other areas of focus. Balanced schedules aligned to care models and including appropriate capacity for relief staffing needs enable the delivery of high quality care, provide equity and predictability for frontline staff, and reduce the risk of working short-staffed. Pay accuracy (a by-product of staff scheduling) is vital to maintaining the trust and commitment of employees and maintaining positive relationships with unions. Real-time fact-based information driven by reporting and analytics is required to drive effective management interventions and strategic plans.

These are all components that are part of an integrated journey and the main artery that drives them within and across that integrated journey is *the staff scheduling environment*. Hence, this environment, and the potential opportunity it may afford the health system, deserves attention.

Types of Benefits Realized from Improving the Staff Scheduling Environment

Enhancement: Patient Care, Employee Experience, Labour Relations, Cost Savings

Reduction in:

- clinical errors due to fatigue
- clinical errors due to clinical staff working short-staffed
- number of over-baseline and uncovered shifts
- overtime and/or Agency spending
- absenteeism
- turnover and associated training and orientation costs
- cost of labour relations activities such as grievances, and after-the-fact cost to address employee concerns
- cost of relief staffing
- costs of systems integration and retrofitting due to incomplete or incompatible business needs

Continuity of care for patients, who are more comfortable expressing care needs to staff they come to know

Increase in employee retention and decrease in training/orientation of new staff

Decreased cost of resolving grievances

Positive working relationship with unions is maintained

Ensure that employee work-life balance is not affected by scheduling or rotation rules

Additional equity for all managers so they benefit from consistent support structures

Increased equality for staff so union members are deployed using the same rules unit to unit

Figure B: Benefits of improvements to the staff scheduling environment

Benefits Achieved by Workforce Edge Clients

The following are some examples of benefits achieved for past Workforce Edge clients:

▶ **Addressing variance from staffing plans** – An analysis of schedules across 21 units for a health system in Western Canada identified variances where actual staffing exceeded staffing plans. Improvement from optimizing rotation and relief frameworks was estimated to create savings of 26.9 FTE for RNs only. In Eastern Canada, a similar analysis of RN rotations for just 7 units identified close to 25.0 FTE that were not aligned to baseline requirements.

▶ **Reducing overtime and total labour spend** – In an identified priority program, a major health system in Western Canada realized drastic and immediate reductions of approximately 10% in overtime which stabilized at this reduced level for over three years after implementation of their new rotations and relief strategy in a priority program area. This same program displayed total spend reductions of 650K annually for three consecutive years to date across (primarily) 3 units.

▶ **Reducing total labour spend** – a remote community hospital in Atlantic Canada, which adopted new business processes for staff scheduling, has consistently demonstrated reductions of 1 to 2% in total spend month over month for at least 12 months after implementation. This achievement is especially notable given the massive degree of change required by leaders and employees as they moved from one-unit largely paper-based scheduling to remote scheduling services provided by a centralized office in an urban centre.

▶ **Planned FTE and headcount reductions** – a rotation quality improvement project recently delivered FTE and position reduction in an urban hospital implementing care model changes across 4 test units, resulting in savings of approximately 2 FTE and 5 positions per unit. In an Eastern Canada facility, critical care rotation improvements enabled reduction on average of 2.5 FTE and 7 positions per unit on master schedules.

▶ **Enabling care model transformations** – across 6 Med/Surg units of a hospital in an urban centre, new master rotations enabled implementation of a care model which was designed by their clinical leaders. In the new care model, RPN positions would be introduced in some units and expanded in others. The master rotations provided by Workforce Edge allowed the units to transition approximately 12.5 FTE from RN to RPN per unit, with an estimated annual savings of $28,263 per FTE transitioned.

▶ **Establishment of sophisticated centralized service organizations** – from design through to implementation and sustainment Workforce Edge has partnered with health systems in creating service organizations to maintain business process flows through HRIS, scheduling/timekeeping and payroll systems nested with strategic and transactional staffing service centres of excellence - in organizations from 3,000 to over 100,000 employees. Much of this work has been at times of consolidation and integration of various organizations and electronic systems.

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