

Schedules that Work

Introduction

This deliverable marks the third deliverable of three for defining a system architecture for “Schedules that Work.” The first two deliverables were the Concept of Operations and System/Stakeholder Requirements. This project should be viewed as the collection of all three deliverables. The Concept of Operations and Requirements will be referenced by this document, but not replicated in their entirety.

This document is divided into sections. The first describes each of the systems that comprise the Schedules that Work System of Systems. In this section, for each of the processes, the inputs, outputs controls and process description will be documented. In addition, a cross reference for tracing requirements by stakeholders to these processes is at the end of this section. The second section describes the interfaces and interactions between the systems. Each of the interfaces is scored in terms of complexity and feasibility. Every effort is made to keep interfaces as simple as possible and to put any required complexity in the sub-systems themselves. The third section presents some design possibilities for the architecture across a range of scenarios. Finally, the fourth and last section provides considerations for how this architecture might get launched i.e. how to get interest in such a system, winning over the hearts and minds of the national consciousness and some recent encouraging trends which may influence moving such a concept forward.

As a brief refresher, here is the mission and objectives for the Schedules That Work System of Systems:

To provide an acceptable schedule and living wage to service industry workers to

- *Enable a public and economic good of intact families,*
- *Ability to afford an adequate living, and*
- *Equitable access to education and healthcare,*

While ensuring employer market competitiveness, profitability and public citizenship

Part One: System and Process Descriptions

1 Employer Processes

A. Planning, hiring and training processes

This is the process that starts with the overall organizational planning process for budgeting purposes. Starting with business strategies and ending with trained employees working, this process traverses many departments and systems in most organizations. In business entities, once revenue and margin targets are set, expense budgeting occurs to ensure targets are met. In non-business entities, the target may just be an expense target. In both cases, the target is often derived by considering the prior year, with any known expected changes for the coming year(s). This process ultimately includes the cost of labor, which includes direct wages, employer paid taxes, benefits, hiring and training costs. In some organizations it may also include employment mix targets, expected overtime, and expected average hours worked per week at a blended wage level. In most organizations, there are fixed costs associated with employees and then costs associated with hours worked.

The reason this process is important to the overall system is that there are some critical decisions made with regard to hiring. These decisions are: How should hiring needs be met? Should new positions or backfilled positions be filled with a full-time, fully benefitted employee or should several part-time hires be met to avoid benefits' costs? Or should there be a substantial temporary employee program such as college internships or seasonal hiring if demand requires this strategy? These areas are all for consideration for the design process to ensure the requirements for these areas are met. Once the plan is set, then it is executed. The required hires are made, employees are trained, then put on the job. Training is an important process to include as it substantially increases with part-time workers (volume) and due to high turn as part-time employees may leave to find full-time work. The hiring process is also important to consider as a part-time strategy may cause the cost of the hiring process to grow several times larger than without a part-time strategy.

For the purpose of the architecture, we have left this as one holistic process; however, further analysis may be appropriate to split these more discretely between staffing planning, hiring, training and budget to hiring reconciliation processes. Each of these would have inputs and outputs with definitions for beginning and ending.

Inputs:

- Overall strategy for the organization
- Current level of on-hand employees
- Historical levels of attrition and transfers

Outputs:

- Hiring plan
- Labor budget
- Hired employees
- Trained employees

Controls:

- Actual vs. planned hires are reviewed and appropriate actions are taken if plan is not on track
- Labor budget is used as guideline for operations as the next year unfolds.

Critical Design Outcomes

- Analysis must be able to show that the full life cycle costs of training, recruitment, safety and efficiency are less than optimal with forced part-time (e.g. full time worker could cover, but part-time is used to eliminate benefit cost). **Verification:** Assess, monitor and track full life cycle cost of workforce base: Direct Labor, Benefits, Workers Compensation (safety cost), Training, Recruitment.
- Analysis must also include demand-driven part-time and research to understand which employees and/or potential employees are part-time by choice – i.e. obtain benefits elsewhere, may have physical impairments or may be students and/or retirees. **Verification:** Percent of part-time non-benefitted employees who want to be (% , measured by sampling or population survey).

Requirements that must be met by the design:

- 1.2 Flexibility to staff to operational hours which may vary based on forecasted customer demand. **Verification:** monitor customer demand volume over the transition period to identify any trend.
- 1.3 Ability to flex staffing up or down on short notice if demand is higher or lower. **Verification:** measure the number of schedule changes one week before scheduled day of work, also measure changes between one week and the day before the schedule is worked.
- 1.4 A market of qualified employees to hire from to meet needs for filling positions. **Verification:** the number of applicants by position and percent of positions accepted vs. offered.
- 1.5 A competitive wage and benefit offering to present to prospective employees. **Verification:** Turnover due to compensation.
- 1.6 Ability to train employees efficiently. **Verification:** Cost per employee trained, Total organization training budget in \$ and labor hours. This is usually a fragmented cost across an organization: training organization costs, trainers who train (often core employees who get a premium for training), orientation training, on-going training.
- 1.11 Minimize (optimize) the number of benefitted employees. **Verification:** See total life cycle costs of workforce above. Simply measuring % benefitted employees may not translate to sustainable savings after all costs are considered.
- 2.3 Adequate wage that enables meeting financial obligations. **Verification:** percent of workforce in an organization or a community on any form of public assistance. (US Census, Surveys)
- 2.8 Ability to find adequate day-care options (for employees needing it) **Verification:** Day care waitlist members vs. total capacity, within a community.
- 2.9 Health benefits. **Verification:** percent of community on public healthcare vs. company plans vs. no plan
- 2.10 Time off benefits. **Verification:** percent of workforce with ability to take time off with pay for sick time or vacation. As a subset, we may want to also just look at what percent of part-time can take any time off (even without pay). As a mental health measure the percent of paid time off that is actually time off taken vs. just paid out (many union agreements just pay out unused vacation or stop accruing it). Example: if you qualify for 4 weeks of vacation and took only two weeks of paid time off, then 50% would be the ratio of days taken vs. days eligible to take.
- 2.11 Retirement benefits. **Verification:** percent of active workforce in the community that has a job with any sort of retirement plan. Percent of workforce population over 30 that has retirement funds (in any plan) or a defined benefit retirement (e.g. public employees may still get this).
- 2.12 Opportunity to learn new skills to be more valuable to the employer. **Verification:** number of jobs an employee is eligible to work (not limited to just one employer).
- 2.13 Ability to change jobs within the employer to try something new while staying with the same employer. **Verification:** proportion of employees who transfer to a new role vs. number of roles/workforce population.

- 4.3 Employees can answer questions. **Verification:** Training certification/process/procedure to report: number of questions that could not be answered on the spot. May also be a sampling on a periodic basis.
- 4.4 Employees can flex when the situation is “not in the manual” to meet customer needs. **Verification:** Service incidence system. # of incidents solved to the satisfaction of customers.
- 4.5 Employees are patient with children and elderly family members. **Validation:** Customer satisfaction surveys (periodic sampling across key customer segments).
- 4.6 Employees are helpful at solving customer problems. **Verification:** see 4.4 above.

B. Workforce scheduling systems

This process begins with a revised demand forecast and ends with worked shifts (and ultimately paying employees for those shifts). Several critical decisions are made with respect to this process: the start and end time of each shift, the regularity of the shifts, the changes that might be made to a shift from the time it is communicated to the employee. The amount and structure of the shifts required in this process related directly to the process described below regarding Operational Decision Making with respect to operating hours or other artifacts that drive shifts (such as promotions and/or events, etc.). This is an area that impacts the work life of employees, based on the lead time given for schedules or changes made at the last minute to meet demand or at the request of the leader to change shifts. Many of the requirements are based on this process to ensure a level of predictability for the employee and meeting customer demand for the employer.

Inputs:

- Forecasted customer demand
- Scheduling rules for creating and scheduling shifts
- On-hand employees available and trained for work
- Employee requests for swapping shifts or taking time off

Outputs:

- Employee schedules (initial and final)

Critical Design Outcomes

- Ensure schedules provide a degree of choice and flexibility vs. centralized command and control. **Verification:** Percent of shifts that are selected by employees vs. assigned.
- Ensure that if schedules are not meeting needs, a robust process for swapping of shifts can be used to address “first pass schedule” that meets business needs, but may not meet employee needs. **Verification:** the number of shift swap transactions divided by the number of shifts before a schedule is worked.

Requirements to be met by design:

- 1.6 Ability to schedule employees efficiently to meet demand. **Verification:** Workload fit percent: % of hours scheduled that meet workload demand.
- 1.8 Ability to accurately track and understand if scheduling goals are being met for efficiency and customer service. **Verification:** Actual vs. planned wait times for service operations. Percent of actual (earned) workload covered by worked shifts.

- 1.9 Ability to incentivize good attendance by employees. **Verification:** percent of call-out shifts out of total shifts scheduled.
- 1.10 Ability to present a well trained workforce to customers (service business) or ability for qualified employees to build a quality product that is defect-free (product business). **Verification:** Defect measurement (for both services and product organizations).
- 2.1 Adequate number of hours worked per week to meet financial obligations. **Verification:** percent of total organization employees whose annual income exceeds nationally determined poverty level.
- 2.2 Adaptiveness for scheduling the amount of work based on time priorities and preferences e.g. accommodate part-time by choice. **Verification:** Similar to metric above regarding the percent of non-benefitted employees working by choice in non-benefitted roles.
- 2.4 Schedules that are provided in time to make necessary plans for non-work activities. **Verification:** percent of management requested schedule changes within of week and within a day of working a schedule.
- 2.5 Ability to have mechanisms to trade or give away shifts to other qualified employees. **Verification:** Shift swap and giveaway volume trending. Percent of employees meeting par-level number of worked hours.
- 2.6 Schedules that are predictable over a monthly or multi-month period of time. **Verification:** Percent of shifts scheduled over two week out from the day of work.
- 2.7 Repeatable planned time to be with family or friends (e.g. predictable periods for families to be together). **Verification:** percent of shifts that overlap within a week i.e. percent of hours that were the same each day (perfect score would be 100%)
- 2.15 Ability to optimize time with loved ones to build family relationships. **Verification:** periodic sampling based surveys; or voluntary panel group monitoring.
- 3.1 Ensure the system accurately represents employees' schedule preference information. **Verification:** Audit based.
- 3.2 Ensure options exist for stable weekly schedules as defined as the overlap of scheduled hours week over week. **Verification:** See 2.7 above.
- 3.3 Enable scheduling customers to select range of scheduling efficiency vs. employee preferences. **Verification:** System testing
- 3.4 Provide mechanisms to enable incentivizing good attendance by workers. **Verification:** Process audit and attendance compliance levels.
- 3.5 Provide mechanisms to assess if schedules are meeting documented needs of employees. **Verification:** percent of schedules meeting availability, position, days off and time of day preferences.
- 3.6 Provide mechanisms to assess if scheduled work is meeting customer needs/demand (service) or production needs demand (product). **Verification:** Measurement of unmet demand, based on volume processed curved (periods of time with flat-lined demand compared to total service time available/hours of operation).
- 3.7 Provide mechanisms to enable employees to know about other (qualified) employees who could substitute for them on a shift. **Verification:** percent participation in posting available shifts for coverage over a one year period.
- 3.8 Provide mechanisms to enable employees to find and sign up for extra shifts if they are available and if they have the qualifications to work the shift. **Verification:** Percent of shifts posted for pickup that are actually picked up.
- 3.9 Provide mechanisms for people in a similar locale to be scheduled together for car-pooling or public transit. **Verification:** Percent of employees using pooled shift functionality to promote ride-sharing.
- 3.10 Analytical capabilities. **Verification:** ability to calculate the metrics in this section: system testing and validation.

C. Operational Decision processes

This process begins with customer demand and ends with decisions regarding the hours of operation (i.e. opening time and closing time) for the operation. Obviously this plays a big role in scheduling to ensure that all positions are adequately covered to meet customer demand. The opportunity in this process is to establish consistent hours for reduction of variation for both customers and employees by enabling predictability.

Inputs:

- Annual operating plan projection of business volume
- Guidelines and parameters for which to make decisions

Outputs:

- Final open and close time for the planning horizon (usually the short term – 4 to 6 weeks out)
- Final determination of other operational decisions related to promotions, special events and any extended hours decisions (holidays, early openings, extended hours, etc.)
- Service level required to meet customer expectations

Requirements to be met by the design:

- 1.1 Operational flexibility to modify hours of operation to optimally meet customer demand. **Verification:** Statistical variance of operating hours over a one year period.
- 4.1 Service is available when desired. **Verification:** percent of time service standard is met or not met, compared to standard.
- 4.2 Service wait-time should not exceed 5 minutes. **Verification:** Average wait and percent waiting > 5 minutes in a day.
- 4.7 All departments or venues are open and available for business during operating hours. **Verification:** Availability of all departments compared to longest open department (e.g. bakery hours as percent of store hours of operation in a grocery store). This is really an unused/used capacity metric.

2. Public Reporting Processes and Mechanisms

This is a process that begins with business results and ends when public reporting is issued. It is important to the overall system architecture as it will influence what is considered sustainable earnings. The design here will need to consider key requirements such as reporting the percent of hires that were fully benefitted versus not, as well as (potentially) the predictability of scheduling (what proportion of shifts were changed up to one week out or one day out?).

Inputs:

- Documented results from financial processes, governmental reporting or internal reporting

Outputs:

- Public reporting of key metrics related to full-time benefitted jobs, schedule change percentage and employee turnover.

Critical Design Outcomes:

- Motivate new metrics to provide more insights to the long term viability of an organization (not just profits). **Verification:** Some types of statistics for consideration: (wage factor from highest paid to lowest paid, percent of new hires that are full time benefitted, percent of labor budget that is contractor vs. employee, average hours schedule per week with quartile ranges over the past year.

Requirements to be met by the design:

- 10 Ensure shareholder needs are met for
 - 10.1 Return on investment and profitability
 - 10.2 Do no harm
 - 10.3 Ensure the long term sustainability for a business or organization
 - 10.4 Public responsibility for the company they own (societal value from protecting the environment, providing livelihood for employees but remaining competitive.

3. Regulatory Processes

This process relates to the regulatory environment in which employers do business. The process begins with governmental public good goals for fairness, safety and prevention of exploitation of workers and ends with rules that are enforced by the executive branch of the government. This may impact achievement of the vision via changing the playing field for working. Some potential examples include a differentiated minimum wage as having one for benefitted employees (e.g. \$10/hour) vs. one for non-benefitted employees (base minimum wage + \$5 per hour). This would remove the incentive and motivation for substituting part-time for full-time positions, and enable only part time when limited demand calls for it (e.g. intra day demand spikes during a meal period, intra-week spikes during the week days or on week-ends, or season spikes such as Christmas, summer or seasonal phenomenon.

Inputs:

- Public Interest research and overall long term policy goals
- Current conditions at small, medium and large workplaces

Outputs

- Local, state or federal level rule changes for minimum wage, schedule changes and other work situations (overtime, double-back (time between shifts) and rest periods (number of consecutive hours off work by week).

Critical Design Outcomes:

- Ensure there is a policy goal of disincentivizing straight replacement of full time workers with part-time workers.
- Ensure a level playing field between small, medium and large employers
- Ensure policies are rigorously enforced and clearly interpreted

Requirements to be met by the Design

- 5.1 Wage and hour practices that incentivize benefitted employees or provide a stipend to cover benefits. **Verification:** percentage of employers, weighted by total employees that have a benefits plan offered or a stipend to cover these costs.
- 5.2 Require healthcare benefit coverage if hours per week averages 30 over the calendar year. **Verification:** percent of population covered by a health insurance plan.
- 5.3 Ensure the availability of a healthcare marketplace if employers do not provide this on their own. **Verification:** percent capture/participation by eligible population.

4. Secondary Processes

A. Supplemental Income Processes and Systems

This process relates to the outcome of creating more full-time benefitted jobs. The end result should be less families requiring supplemental income if the number of full-time jobs increases, giving employees opportunities

for benefit coverage (vs. covering themselves), over time (vs. working two 25 hour jobs with no overtime), and less need for two breadwinners (which may impact child care processes below).

Inputs:

- Families requiring financial assistance are identified and apply for benefits; often caused by the limited number of scheduled hours for part-time employees.
- Supplemental income process and policies in place

Outputs

- Financial supplements provided to eligible families: food stamps, earned income credit, child and family welfare, and adult assistance payments.

Requirements to be met by the design:

- 7.1 Minimize the number of people needing supplemental benefits. **Verification:** Participation in supplemental income, assistance and healthcare programs.
- 7.2 Efficiently provide supplemental pay and benefits. **Verification:** Cost per participant
- 7.3 Minimize fraud or the motivation for fraud for supplemental pay and benefits. **Verification:** Audit

B. Child Care Processes and Systems

Child care programs are an important indirect outcome of the success or failure of this System of Systems. The extent to which full-time, benefitted jobs are created, the less demand there may be on child care (due to working one job vs. up to three in a household). If one spouse can get full-time work, then the other spouse may be able to work a more flexible schedule or be more available for childcare to reduce the need for third party providers or taxing an elderly relative.

Inputs:

- Families needing child care for young children or after care for school-age children
- Programs and organizations that provide child-care
- Clearly defined sign-up, drop-off and payment procedures and policies

Outputs:

- Safe handling of children while under the care of the provider
- Peace of mind for the parents knowing their children are safe and looked after
- Payment made to providers to ensure their on-going viability

Requirements to be met by the design:

- 9.1 Provide safe childcare for employees' children. **Verification:** incident measurement
- 9.2 Provide flexible hours to take children at all working hours. **Verification:** Overlap percentage of facilities with prevailing employer hours of operations
- 9.3 Provide stimulating programs to enable child development. **Verification:** Cognitive testing improvement percent
- 9.4 Provide a cost effective service that is affordable for non-exempt hourly employees. **Verification:** percentage of eligible employees' participating. This percent may decrease as employees get more choices for working or can rely on one breadwinner.

C. Educational System and Processes

While this has the most indirect impact, the extent to which schedules are predictable and there is greater financial security, the focus for households with children can be on ensuring educational tasks are being met: going to class on time, completing assignment, early identification of a learning problem or identifying a need for supplemental tutoring or actions, addressing any discipline problems early, and prioritizing education as a path to a fulfilling career. If households are just making ends meet with multiple jobs, unsure amount of hours or hours that are unpredictable, little traction can be had on education, even when children have the potential. The process consists of enrolling children, getting children to school, attending classes, assessing learning, meeting key milestones for learning and achievement. Peripheral activities may include music classes, physical education, after school clubs, and athletics (formal and informal).

Inputs:

- Children who are of age to be in mandatory education
- Institutions to provide educational services (may be public or private)
- Means of getting children to and from school

Outputs

- Imparting measurable knowledge from a given curriculum.
- Well rounded, knowledgeable children who have an appreciation for knowledge, arts, physical education and social skills.
- Sustainable schools that can count on children from stable households

Requirements to be met by the design:

- 6.1 Students who are healthy. **Verification:** Absence due to illness
- 6.2 Students who have had a good night's rest. **Verification:** Survey
- 6.3 Students who are not distracted by home life drama to enable focusing in class. **Verification:** Academic performance, compliance/completion percentage with assignments
- 6.4 Parents with time to confer regarding a student's progress. **Verification:** Participation percentage
- 6.5 Parents who can provide a stable home life (meals together, interest in children's activities, role models). **Verification:** Survey or panel
- 6.6 Parents who encourage success in school. **Verification:** Participation in go-to-school night, surveys, panels.

D. Healthcare System

The healthcare process entails the activities of enrolling in healthcare plans, using the plans for both preventive healthcare activities as well as when ailments or accidents occur, filing claims, getting reimbursed and/or applying claims against a deductible. The plans usually incur a weekly or monthly fee to be a member of a healthcare plan. The need for healthcare services has been amplified by the switch from full-time to part-time labor. With full-time labor, employers often pick up at least half the cost of these plans, while for part-time labor, employees must shoulder the full burden using the publicly available exchanges. Lower income people may qualify for subsidies, but the financial burden is real. By creating more healthcare jobs, these costs can be lessened for employees and the loyalty and commitment by employees through their efficiency and flexibility may offset these costs over the long haul and result in less turnover or days off sick.

Inputs:

- Employees needing healthcare plans
- Established plans and procedures for using the plans
- Enrollment in healthcare plans
- Health incident (sickness, broken bones, disease symptoms, etc.)

Outputs:

- Healthy employees and communities. **Verification:** Public health metrics
- Focus on preventive health activities (early detection and intervention in diseases, exercise and diet/nutrition). **Verification:** Surveys, participation in vaccinations, participation in wellness activities.
- Favorable outcomes from doctor visits. **Verification:** Outcome metrics from healthcare industry
- Claims, reimbursements and health savings accounts. **Verification:** Participation Rates

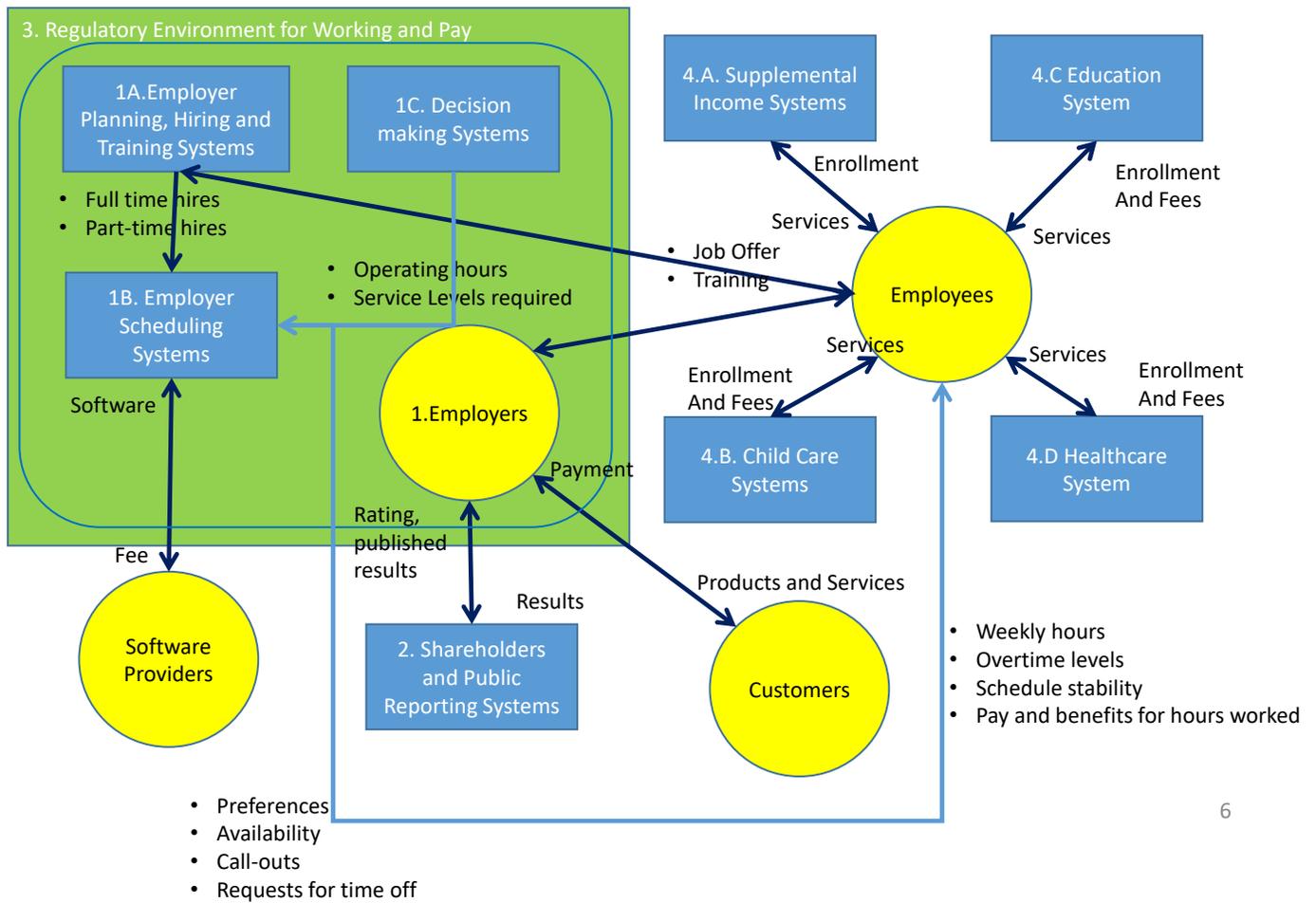
Critical design outcomes:

- Reduced need for public programs due to employers covering more employees through full-time benefitted jobs that include healthcare.

Requirements to be met by design:

- 8.1 Provide benefits programs for participants. **Verification:** Participation
- 8.2 Effectively execute claims against the agreed-to and purchased plans. **Verification:** Cost per claim
- 8.3 Maximize participation in health plans via public programs (ACA) for those who need it, but minimize the need for these programs through employer plans. **Verification:** ACA participation (should decrease).
- 8.4 Maximize participation in private health plans (employers' plans). **Verification:** percent of employees eligible and participating in available plans.
- 8.5 Provide programs to prevent health problems and drive community health. **Verification:** participation

System and Stakeholder Interfaces and Interactions



Part Three: System Design Considerations

This section presents some potential idea triggers for consideration in design to show that the system architecture is not beholden to one possible solution. Here are some thought triggers for design:

- Organismic System: System to provide an “Uber” of open shifts between non-competing employers. E.g. employers provide training and bid for shifts to fill in a workplace defined by a community marketplace. Employers might provide incentives at certain thresholds to motivate and incentivize shift coverage (e.g. at Macy’s if you average over 20 hours per week you can get a 6% commission vs. 3%).
 - App for mobile devices (maybe call it: WorkNow). Employers sign up to be members with conditions for offering training people in roles, identifying competing employers (if that is an issue), and committing to putting out work shifts. Pay is determined by the core job and the marketplace and demand conditions. Pay also includes (perhaps set by public authorities) add-ons to pay for health-care and retirement contributions – in effect pay the employee the loaded cost that is spread across most organizations. Employees would then join WorkNow as workers with a portfolio of qualified positions for which they have pursued the training. WorkNow would clear credentials in terms of work eligibility, background checks and immigration concerns. Like workers may then form communities for trading shifts for similar work and work out conditions to make work work for their lives.
- Societal System: Provide capability to formulate shifts and let employees select a portion of shifts for their needs. For example, perhaps 3 of five shifts are set up by the employer and 2 of the five are required to be selected by employees. Swaps are allowed so people can design their own schedule.
- Regulatory approach: Redefine minimum wage to be differentiated between a benefitted job vs. a non-benefitted job so that the motivation to convert full-time jobs to part-time is neutralized. The incremental amount can then be used to purchase health care coverage on a marketplace. This is estimated at about \$5 per hour premium.
- Pay for flexibility: if a business needs last minute employees, make these rates of pay or shifts more lucrative for employees to motivate coverage. Example: post open shifts for straight time pick up- if not filled then offer at overtime rate.
- Ancillary to these components described here is the effectiveness of training and recruitment organizations e.g. what percent of total labor in these departments is actually doing training vs. infrastructure/overhead/logistics. Not able to get to 100% easily but it is likely organizations are vastly different in this ratio. The percent of costs allocated to employees in a decision model must be a high percent of total training and recruitment costs.
- Public reporting: calculate benefits cost savings from part-time hiring at employers and report in annual reporting (10-K). For example: if total work demand is 5,000,000 hours, FT workforce meets 60% of this amount, then the benefit savings would be roughly 2,000,000 hours (currently met by part-time labor)/(FT hours per week x 52 weeks per year) to give FTE number of ~1000 FTE if the work was done by full time employees. Then multiple this by the annual benefit cost (~\$5000 per year/FTE) = to get \$5,000,000 benefit to the employer. To give publicity this might be reported as percent of CEO pay attributed to avoiding benefits. For brand conscious employers, this may motivate changes to ensure meeting corporate citizenship goals, and perhaps shift investments from other causes for this purpose to their employees.

Part Four: Practical Launch Considerations

Complex Stakeholder Structure: This is a very complex multifaceted problem that would require a high level of engagement from a group of stakeholders who typically do not interact. Other obstacles are the suspicion of trying to coordinate government policy with business goals and societal outcomes that have a long term benefit, but may have a short-term cost. The stakeholder challenge might be addressed by finding employers who have already demonstrated progress in this area and use that to advance further concept and apply many of the verification metrics to evaluate the overall system. The project cannot be in a laboratory phase doing design too long (limit to one year) so that solutions can be tested and modified on an agile basis to meet the end goals. Thinking about the Vee concept, the right side may come out looking quite different from the left side due to all the complex interactions and considerations.

Use of Simulation and Pilots: Once the components are designed, the project will likely require several simulations or other method to evaluate various options. Once a short list of viable starting points is identified, then a simulation or other method should be used to evaluate a longer list of options, followed by a real world pilot in several interested large organizations to test out the concepts.

Government Role and Interaction: Like it or not, the rule-making organizations must be involved. What is happening right now is that several legislative bodies are introducing narrowly focused rules for scheduling, work, and narrow classifications for higher minimum wage (e.g. NY State has a F&B \$15/hour minimum) that do not take into account the organismic and societal considerations. The regulatory authorities must be partners to define the outcomes. Ultimately the longer term benefits should improve businesses' long term sustainment and viability through employee engagement, positive brand and strong communities from which to draw workers.

Getting this going: This may start as an initial exploration in communities where this is already a hot issue, such as New York State or San Francisco. It will take some meetings of the minds to bring government officials, businesses, software vendors and systems engineers together to agree to work on a pilot proposal to address symptoms that are now too commonplace due to the uncertainty of work, the fragmentation between long term public good and profits.

Final Words: At the beginning of this project, we were asked to not shy away from potentially unsolvable problems. This large society/business/economic problem certainly meets that criteria! However, there are several intersecting interests and attention this is now getting that may motivate progressive employers, communities and employees to work together to solve this and create a more sustainable work as the definition of work undergoes one of its most significant transformations in a generation.