Note on this Draft

This is a working draft of the Roadmap, with some portions noted as incomplete. It is being shared in draft form for a workshop on November 10. We are looking for feedback on content, structure, and usability.

How to use this Document

The Roadmap is designed for use by a range of audiences and actors, including participants in both the public and private sectors. Some strategies are led by one sector or or the other, while both sectors may play a leading role in other strategies.

Use the Summary Playbook, beginning on the following page, as a shortcut into different sections of the Roadmap, which contains more detailed strategies organized in three sections:

- **Public Health Infection Reduction Strategies** provides guidance for policy makers with influence over the interventions established to prevent spread of the disease.
- **Cross-Sector Strategies** are applicable to many, most, or all sectors.
- **Focus Sector-Specific Strategies** are tailored to key strategies selected based on their importance to the Puget Sound economy.

The document concludes with suggested Pre-Pandemic Preparations to help the public and private sectors get ready for future emergencies and a short list of Thematic Learnings from the COVID-19 experience.

Throughout the document, click on text underlined in blue to be taken to relevant content within the Roadmap or to external resources. The menu in the footer can be used to navigate to major sections.
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Consider multiple dimensions of public health and target interventions

Common Challenges
- A singular focus on disease prevention negatively impacts other measures of health
- An early lack of knowledge of disease characteristics hinder the application of targeted interventions

Strategies
- Move from broad to targeted interventions
- Consider multiple dimensions of public health
- Evaluate potential interventions on multiple dimensions

Apply cross-sector strategies

I. Information Sharing & Regulations Development

Common Challenges
- Public sector may not know how to engage private sector partners.
- Proliferation of business associations, like multiple Chambers of Commerce, hinders the dissemination of information.
- Private sector difficulty getting information from the public sector
- Decentralized calls require businesses with regional or multi-state operations to attend multiple calls.
- Lack of centralized source of information on public health regulations and guidance.
- Rapidly changing guidance and guidance that is not applicable to all work situations.
- Science-based information may be inaccessible to some audiences.
- Industries or businesses that are affected by multiple regulatory agencies may suffer if regulations are not coordinated.
- Conflicting or competing regulations create uncertainty within business communities

Strategies
- Connect across sectors and determine the best way to engage different private entities
- Engage select private sector entities in public-private collaborations
- Establish websites and calls to provide centralized, useful, and accessible information
- Proactively reach out to prioritized target audiences
- Co-create regulations and safe workplans for continuing business operations
- Coordinate regulations across agencies and levels of government

II. Adaptations & Continuing Operations

Common Challenges
- Business operations reliant on public sector functions
- In-person industries indiscriminately shutdown in broad efforts to prevent spread of the virus
- Regulations created without industry participation are poorly received
- Regulations not coordinated across related agencies
● Business solvency challenged by short-term cash flow gaps
● Changes in the regulatory environment or consumer behavior disrupt pre-pandemic business models
● Technological adaptations are challenging or costly to implement

Strategies
● Maintain business-critical government services
● Provide direct assistance
● Modify private sector business models and adopt technologies
● Coordinate scarce resources
● Adopt remote work models where appropriate
● Support workers and address potential labor shortages
● Address potential supply chain disruptions

Apply sector-specific strategies

Construction

Common Challenges
● Restrictions on on-site labor at construction sites may not be as applicable as in other sectors.
● Delays can result in considerable costs and can impact the delivery of new building stock.
● Construction projects depend on government services, including in-person and on-site meetings.
● The sector is very reliant on supply chains and disruptions can provide significant delays.

Strategies
● Provide rapid-response guidelines to allow safe, early operation of construction-related businesses
● Support broader implementation of online government services related to the construction industry
● Implement measures to secure critical construction supply chains

Manufacturing

Common Challenges
● Certain manufacturing operations will be deemed critical activities and will need to be maintained.
● Supporting supply chains will also need to be protected.
● Manufacturing businesses are often able to operate more effectively under workplace limitations.
● Local manufacturing businesses can repurpose their operations to support short-term pandemic needs.

Strategies
● Identify and protect critical manufacturing operations
● Minimize overall disruptions to manufacturing operations and supply chains
● Explore retooling opportunities to meet pandemic-related needs

Transportation & Warehousing

Common Challenges
● Changes in requirements in other regions and countries can have a substantive impact
● Information potential challenges with logistics and supply chains can be difficult for businesses to find
● Substantial delays due to upstream disruptions can have ripple effects throughout the entire economy
● Local and regional systems for logistics to support supply chains may not have sufficient capacity
● Changes in demands for logistics during a pandemic can result in rapidly shifting labor needs
● Pandemic-related public health measures will also likely have significant negative impacts on the labor needs of other transportation-related businesses, such as TNCs.
● Transmission and infection during a pandemic pose a risk to meeting critical labor needs

**Strategies**

- **Coordinate information exchange**
- **Manage capacity challenges**
- **Address shifts in labor needs in the sector**

**Information Technology**

**Common Challenges**

- Technology essential to the many other sectors may become even more important during a pandemic
- The tech sector must balance market challenges, market opportunities, and civic responsibility

**Strategies**

- **Contribute to market- and policy-based solutions**

**Food Services & Drinking Places**

**Common Challenges**

- Reduced demand and on-site dining prohibitions
- Hiring and retention challenges
- Supply chain issues that cause shortages and higher prices for inputs
- Challenging customer interactions

**Strategies**

- **Adapt regulations and shift business model to allow safe operations**
- **Address challenge of enforcement of restrictions falling on restaurant employees**
- **Direct food waste and industry resources to areas of need**
- **Leverage technology to reduce risk of infection and improve experience for customers**

**Small Businesses**

**Common Challenges**

- Larger businesses are better resourced to move to online purchasing
- Consumers may desire making fewer stops, which favors larger retailers with larger inventories
- Many small businesses lack the resources to independently adapt to evolving market conditions
- Working capital reserves are typically very small, making it difficult for small businesses to weather the economic shock of a pandemic
- Businesses focused on discretionary products will be most impacted

**Strategies**

- **Focus on customer service and local presence**
- **Support small businesses with information, direct financial support, and technical assistance**

## Focus on Key Learnings
Introduction

This Roadmap was developed in an effort to strengthen the Puget Sound Region’s economic resilience in the face of future pandemics or other emergencies. Given its focus on economic resilience, the Roadmap does not address every aspect of preparing for, responding to, and recovering from future pandemics. It is also not a prescriptive document establishing a detailed plan to be implemented. It presents a menu of options, with suggestions both for what to do before the next pandemic and what to do during the next pandemic. It is informed by and reflects upon experiences from the COVID-19 pandemic, but it is not a COVID-19 After Action Report.

The Roadmap is intended for a wide range of audiences from the public sector, including policy makers, emergency managers, and public health officials, as well as the private sector, including business owners, business continuity managers, and all manner of business associations.

The Roadmap is a place to start and a series of ideas that may prompt other, even more creative and effective ideas. It is designed as a tool, but not as a template. The goal is to identify public and private sector actions that are effective for protecting public health and sustaining the economy, optimizing for both disease prevention and the continuation of economic and social interactions.

The Roadmap was created around a key principle: that economic (and social) activity is necessary for holistic public health. Economic activity is necessary for business owners and employees to earn incomes that provide food and shelter for themselves and their families. Business activity, and businesses themselves, are not in competition with public health: they are part of a comprehensive view of public health.

The insights and strategies contained in this document were derived from economic analysis, desk research, surveys, and interviews with representatives of a variety of public and private sector organizations. Best practices were drawn from the greater Puget Sound area in Washington State and PNWER’s U.S. and Canadian jurisdictions across the greater Pacific Northwest.

Applicability to Future Pandemics and Other Emergencies

The Roadmap is neither an in-depth review of the COVID-19 pandemic nor a blueprint for preparing for and responding to COVID-19 in the future. Its focus is broader, with ideas that may apply to future pandemics, which may or may not look like COVID-19, and future emergencies in general. Future pandemics may or may not be respiratory in nature, meaning that interventions designed to curb spread of the disease may look significantly different. Future pandemics may or may not result in labor shortages and supply chain disruptions. In all cases, however, a novel disease will come with lots of unknowns, challenging us to learn quickly and work towards effective disease prevention strategies.
Arc of a Pandemic

The COVID-19 pandemic demonstrated that pandemics do not run in neat phases or “waves.” Broadly speaking, however, there is an overall arc to pandemic progress that can influence the kinds of decisions being made based on information available.

The early days of a pandemic fall into the Period of Uncertainty, when general society has little to no understanding about how the disease in question is spread. Consequently, public and private sector decision makers have little idea about how to optimize public policy and economic strategies for disease prevention. This uncertainty is not necessarily at the scientific community level, and does not represent total ignorance. Rather, it highlights the general public’s lack of nuanced understanding of the disease and its vectors, and how best to respond effectively with targeted interventions.

As the scientific and medical communities better understand disease spread and develop prevention, treatment, and vaccines to combat the pandemic, society enters the Period of Knowledge. The public and private sector practitioners can use this information to create and implement more targeted disease-prevention measures that allow communities to safely return to daily activities, though those activities may be impacted by these targeted measures. For future pandemics, the transition from Period of Uncertainty to Period of Knowledge may be quicker than during the COVID-19 pandemic due to the valuable lessons learned during this time.

Over time, this transitions into the Period of Recovery as communities adapt to life with the novel disease, and the full impact of actions taken during the earlier periods are seen in society and the economy. Daily life resumes, though communities often cycle between periods of opening and closing businesses as caseloads fluctuate with variants of concern and seasonal variations.

Eventually society enters the Post-Pandemic period, during which the public and private sector can prepare for future pandemics and emergencies.

Pandemic Phases, Defining Characteristics, and Primary Focus

Each phase described below includes (in parentheses) the approximate Timeline for COVID-19 Pandemic, as well as the defining characteristics and primary focus of the time.

| Pre-Pandemic (prior to December 2019) |
| Primary Focus |
| ● Preparing for the next pandemic based on previous experiences. |

| Period of Uncertainty (January - November 2020) |
| Defining Characteristics |
| ● A novel emerging disease or strain identified, communities begin to see widespread transmission. |
| ● Medical and scientific community unsure how specific disease or strain spreads, which preventative measures are best. |
| ● Population gets sick, potentially overwhelming the health care system. |
| ● Widespread use of quarantines - Commerce and daily life shut down to reduce spread of disease. |
| ● Implementation of travel advisories and restrictions. |
### Primary Focus

- Application of broad interventions established with the primary objective of limiting spread of the disease and limiting spread across geographies.
- Limit spread of disease across different geographic areas.
- Learning about how to identify and combat the disease (testing and vaccine development) and how to limit transmission through targeted interventions.

### Period of Knowledge (December 2020 - September 2021)

#### Defining Characteristics

- Scientific and medical community generally understand community spread patterns; how to prevent spread.
- Responses and interventions become more nuanced and targeted to the specifics.
- Vaccines developed and distributed.
- Effective treatments and widespread testing methods identified, made increasingly available.

#### Primary Focus

- Application of targeted interventions that reduce transmission while allowing safe community and economic interactions.
- Testing, vaccine, and PPE distribution.

### Period of Recovery (October 2021 - Present)

#### Defining Characteristics

- Variants of concern may emerge.
- Vaccine boosters distributed as needed within countries and communities with means to source boosters.
- Daily life begins to resume, communities cycle between periods of opening and closing businesses as caseloads fluctuate.

#### Primary Focus

- Resumption of pre-pandemic community and economic interactions.
- Maintaining best practices identified during response and recovery.
- Establishment of “new normal” and the need to adapt public sector responses and private sector business adaptations.

### Post-Pandemic (to be determined)

#### Defining Characteristics

- Disease is eradicated in the general population or classified as ‘endemic.’
- Disease-restricting policies are dropped for extended periods of time without resurgence in cases.
- Life enters a ‘new normal,’ though conditions may not exactly resemble the pre-pandemic period.

#### Primary Focus

- Revisiting lessons learned, updating pandemic resiliency plans.
A Roadmap to Preparations, Response, & Recovery

Section Contents

- Public Health Infection Reduction Strategies
- Cross-Sector Strategies
- Focus Sector-Specific Strategies
Public Health Infection Reduction Strategies

This section is designed for decision-makers to give them a framework for thinking about infection prevention strategies in the context of broader public health goals. It offers an introduction to some public health concepts that could be considered when designing and implementing strategies for reducing infections in a pandemic.

The framework incorporates:

- **How infectious diseases spread.** Understanding modes of disease transmission can help determine which interventions are appropriate for the disease in question.
- **How changing knowledge informs the types of interventions available.** As more information is learned about a novel pathogen, this allows for more nuanced interventions with fewer widespread impacts.
- **An introduction to multidimensional public health.** Public health of a community includes physical wellbeing, but also the ability for community members to make a living, learn, and socialize. Viewing public health through this lens can assist decision-makers in selecting interventions that support public health in a more holistic manner.
- **A tool for evaluating potential interventions.** How to evaluate potential interventions in terms of their impacts to disease transmission, social well-being, and economic well-being, and the costs to implement them.

Decision makers must remember that pandemics are long-term emergencies that last for months or years. This means that some emergency response frameworks will not adequately address the challenges faced during this time.

**How Disease Spreads**

All communicable diseases that can be transmitted from person to person are spread by contact, though the form that contact takes can vary greatly. Epidemiologists categorize the modes of transmission for infectious agents (infectious agents are organisms that can produce infections or diseases, and include viruses, bacteria, fungi, and parasites) into several categories (CDC, 2012):

- **Direct contact.** Direct contact includes skin-to-skin contact and exchange of bodily fluids (as in kissing or sexual contact). Examples of diseases that are spread via direct contact include bacterial conjunctivitis, mononucleosis, and gonorrhea.
- **Droplet (aerosol) contact.** Droplet spread can be considered a subset of direct contact. It refers to the transmission of a pathogen via aerosols (droplets) produced when an infectious person breathes, sneezes, coughs, or talks, and another person then inhales the droplets or they enter the person’s body via mucous membranes. Pertussis (whooping cough), strep throat, influenza, COVID-19, and the common cold are all spread via droplet contact.
- **Indirect contact.** Indirect contact includes several subset types of transmission:
  - **Airborne.** Airborne contact refers to the spread of a pathogen via suspension in very small (less than 5 microns in diameter) airborne droplet nuclei or dust. Droplet nuclei can remain in the air longer and travel significantly farther distances than droplets. Measles and tuberculosis are considered airborne diseases.
  - **Vehicles.** This refers to the transmission of an infectious agent via food, water, or fomites (surfaces/inanimate objects). Examples of pathogens spread by vehicles include hepatitis A virus, which may be carried in food and water, and botulinum toxin, which develops in improperly canned foods.
  - **Vectors.** Vectors include mosquitoes, ticks, and fleas. Diseases spread by vectors include West Nile virus infection (mosquitoes), Lyme disease (ticks), and plague (fleas).
Given these varied modes of transmission, contact between a person who is infectious and others can constitute a broad range of scenarios, from physical proximity to sexual contact to touching the same surfaces. Different infection prevention interventions will be more or less effective depending on the mode(s) of transmission for the disease in question.

Infection prevention interventions have varying efficacy and impacts based on the way in which they mediate contact. They exist along a spectrum from interventions that completely reduce or eliminate contact altogether, to those that reduce the likelihood of transmission during contact. These typologies are:

- Interventions that reduce all contact.
- Interventions that reduce the likelihood that a person who is contagious has contact with others.
- Interventions that reduce the number of people potentially infected during contact.
- Interventions that reduce the likelihood of transmission during contact.

Generally speaking, these move from most broad to most targeted in terms of their social and economic impacts. The effectiveness of specific interventions, as well as their economic and social impacts, depend in part on how they are implemented, rather than simply the inherent qualities of the intervention itself.

For example, a specific type of high-quality mask might be very effective in preventing and reducing the spread of a respiratory virus within a population if the majority of the population wears the mask when in public places. However, if the mask is not easily available to the general public, the public doesn’t believe the mask works, or wearing the mask becomes highly politicized (all of which happened in the COVID-19 pandemic), overall take-up may be low and the intervention will not be effective as implemented, despite being effective in ideal circumstances.

**Changing Knowledge Levels: Moving from Broad to Targeted Interventions**

Some pandemics are caused by novel pathogens, meaning pathogens that have not previously been identified or have not previously been seen in humans. Broadly speaking, scientific understanding of novel pathogens tends to be lower than with pathogens that are known to infect humans, but this can still vary. Some pathogens that infect non-human animals are well-studied and, in some cases, portions of this knowledge can be relevant if the pathogen moves into humans. Some novel pathogens or strains are related to known pathogens. On the other hand, some pathogens that are known to infect humans are still poorly understood.

Generally speaking, the Period of Uncertainty of a pandemic will require the use of broad-based infection prevention interventions. In most cases, research will be needed to determine precise infection risk levels associated with different activities, as well as the ability of different interventions to reduce infection risk. While this research is ongoing, broad-based interventions may be necessary to control the spread of this emergent disease.

As knowledge of a disease and its mode of transmission becomes more nuanced, communities enter the Period of Knowledge. This additional knowledge enables the deployment of targeted measures which reduce transmission without drastically interfering with the ability of individuals to engage in activities that support economic and social well-being.

The amount and quality of information available about a pathogen and disease will change over time, and it is important to decision-makers to consider how much information they have available and the level of certainty of that information as they make decisions. Being clear about what information is influencing the decisions being made at different points in a pandemic can also help to increase and encourage public trust in these decisions.

For example, early broad-based interventions in the COVID-19 pandemic, such as stay-at-home orders, capacity restrictions, and school closures, were deployed to reduce community spread of the virus before more-targeted measures, such as use of outdoor spaces, masks, and vaccines, were known or available. While these broad-based measures supported infection reduction, they made operations financially
infeasible for many businesses, resulting in significant economic impacts. When deployed over an extended period of time, these measures (in tandem with the impacts of the disease itself) contributed to a dampening of social interactions, potentially contributing to broader societal challenges with mental health, social cohesion, and overall well-being.

Targeted infection reduction measures implemented later in the COVID-19 pandemic, such as masking requirements for staff and customers and vaccination requirements, allowed businesses to operate at full capacity while still reducing transmission. Some infection reduction measures with low economic impacts may still have had social impacts, though it should be noted that it is difficult to tease out the impact of the pandemic and disease itself versus infection reduction measures on these outcomes. Economic impacts also cannot be easily separated from social impacts - loss of income and work can contribute to mental health and socialization challenges, and these challenges can make keeping work and an income difficult.

Consider Multiple Dimensions of Public Health

**Approach goal setting and interventions from a multidimensional perspective**, drawing on the social determinants of health, including the ability to make a living, learn, and socialize. Individual and public health are complex and multidimensional - the absence of dangerous infectious diseases is necessary but not sufficient for overall well-being. As decision-makers consider strategies to reduce infections, they should also consider the impacts of these actions on economic, social, and emotional well-being, particularly for the most marginalized groups.

Infection prevention/reduction and overall well-being (including economic well-being) are not necessarily in opposition to one another. While disease-related public health safety measures may impact the economy, unchecked infectious disease can have dramatic effects on workforce availability and consumer demand for goods and services.

To consider interventions from a multidimensional perspective, decision-makers should:

- **Establish and communicate the goal they are managing to**, such as eradicating a disease, reducing disease spread, reducing case counts or deaths, or preserving hospital capacity. The goal may be different depending on the disease in question and the pandemic phase, but regularly evaluating, establishing, and communicating the current goal will offer both public and private sector decision-makers the most flexibility in taking actions that support economic, social, and emotional well-being while aligning with infectious disease goals. Communicating the current goal can also provide clarity around why specific regulations are necessary during that particular time period.

- **Ask “What do we need to do to be able to make a living, learn, socialize, and offer goods and services safely?”** rather than a more singular focus on infectious disease prevention. How the community will access key resources, which include economic opportunities, education, and social connection, should be considered when implementing new public health measures. While there may be cases where there is no safe (or safer) way for community members to access these resources for a period of time, the question of how community members will regain access should be raised as soon as possible and this period shortened to the extent possible.

- **Track a broader base of metrics to measure health, including economic, social, and behavioral health metrics.** Tracking case counts, hospital capacity, and deaths is critical for informing infectious disease policy, but a multidimensional public health approach will require tracking a broader range of metrics alongside these numbers.

- **Evaluate the multi-dimensional impacts of different potential interventions.** In addition to weighing the impact of different potential interventions on disease spread, decision-makers should consider impacts to key elements of economic, social, and emotional well-being.

- **Convene experts who represent different health dimensions.** Beyond infectious disease experts, experts in other areas of public health, psychology, sociology, communications, and other areas will have critical insights that decision-makers can draw on.
● Seek to shorten the period of uncertainty to better target interventions based on what is needed to reduce infectious spread. Broad interventions typically have more intense social and economic impacts, though they can prevent disease spread when precise interventions have not yet been identified. To the extent that researchers, public health officials, and decision-makers can reduce the length of time in which precise interventions are unknown, overall well-being will benefit. It will require a robust and well-funded public health system in order to promptly identify targeted infection reduction interventions for novel diseases.

Evaluate Potential Interventions on Multiple Dimensions

Exhibit 1 presents a model for evaluating potential infection reduction interventions in terms of: 1) their ability to prevent infections, both as directed and as implemented; 2) their social impacts, as directed and as implemented; 3) their economic impact, as directed and as implemented; and 4) their hard costs, as directed and as implemented. This final category refers to the costs incurred by public and private sector actors to implement the interventions, rather than the wage, job, or price impacts, which are covered under economic impacts. Along the vertical edge, interventions are organized from broadest (those that reduce all contact between people) to the most targeted (those that reduce the likelihood of transmission when contact happens).

In Exhibit 2, we have included an example intervention from the COVID-19 pandemic under each of these four types of interventions, with accompanying assessments of their performance on the infection prevention, social impact, economic impact, and hard costs criteria, both as directed and as implemented. This template can be used to assess potential interventions for future pandemics.

It is important to recognize that the effectiveness of specific interventions, as well as their economic and social impacts, depend in part on how they are implemented, rather than simply the inherent qualities of the intervention itself. For example, a specific type of high-quality mask might be very effective in preventing and reducing the spread of a respiratory virus within a population if the majority of the population wears the mask when in public places. However, if the mask is not easily available to the general public, the public doesn't believe the mask works, or wearing the mask becomes highly politicized (all of which happened in the COVID-19 pandemic), overall take-up may be low and the intervention will not be effective as implemented, despite being effective in ideal circumstances.
## Exhibit 1 - Worksheet for Evaluating Pandemic Infection Reduction Interventions

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Infection Prevention</th>
<th>Social Impact</th>
<th>Economic Impact</th>
<th>Hard Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad</td>
<td></td>
<td></td>
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<tr>
<td>Interventions that reduce contact between people</td>
<td>As directed</td>
<td>As implemented</td>
<td>As directed</td>
<td>As implemented</td>
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<tr>
<td>Interventions that reduce the number of people that an infected person has contact with</td>
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<td>Targeted</td>
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<tr>
<td>Interventions that reduce the likelihood that an infected person has contact with others</td>
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<tr>
<td>Interventions that reduce the likelihood of transmission during contact between an infected person and others</td>
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</table>
### Exhibit 2 - Impacts of COVID-19 Infection Reduction Interventions

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Infection Prevention</th>
<th>Social Impact</th>
<th>Economic Impact</th>
<th>Hard Costs</th>
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<tbody>
<tr>
<td>As directed</td>
<td>As implemented</td>
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</tr>
<tr>
<td><strong>Broad</strong> Interventions that reduce contact between people</td>
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<tr>
<td>COVID-19 Example: Stay-at-Home Order</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
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<tr>
<td>Example: Gathering Size Limit</td>
<td>Low</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
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<tr>
<td><strong>Targeted</strong> Interventions that reduce the number of people that an infected person has contact with</td>
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<tr>
<td>Example: Testing Requirement</td>
<td>High</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
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<tr>
<td><strong>Targeted</strong> Interventions that reduce the likelihood that an infected person has contact with others</td>
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<tr>
<td>Example: Mask Requirement</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Playbook | Public Health Infection Reduction Strategies | Cross-Sector Strategies | Sector-Specific Strategies*
Cross-Sector Strategies

This section contains common strategies that are relevant across multiple or all sectors. Some strategies are identified as having a Public Sector Lead and others have a Private Sector Lead. If not specified, both public and private sectors play an important role.

Strategies are organized under two broad topic areas:

I. Information Sharing & Regulations Development

I.1 Connect across sectors and determine the best way to engage different private entities.
I.2 Engage select private sector entities in public-private collaborations.
I.3 Establish websites and calls to provide centralized, useful, and accessible information.
I.4 Proactively reach out to prioritized target audiences
I.5 Co-create regulations and safe workplans for continuing business operations
I.6 Coordinate regulations across agencies and levels of government.

II. Adaptations & Continuing Operations

II.1 Maintain business-critical government services.
II.2 Provide direct assistance.
II.3 Modify private sector business models and adopt technologies to reduce risk of infection and improve experience for customers.
II.4 Adopt remote work models where appropriate.
II.5 Support workers and address potential labor shortages.
II.6 Address potential supply chain disruptions.

These cross-sector strategies are supplemented by Sector-Specific Strategies later in the Roadmap.
I. Information Sharing & Regulations Development

Section Contents

I.1 Connect across sectors and determine the best way to engage different private entities.
I.2 Engage select private sector entities in public-private collaborations.
I.3 Establish websites and calls to provide centralized, useful, and accessible information.
I.4 Proactively reach out to prioritized target audiences.
I.5 Co-create regulations and safe workplans for continuing business operations.
I.6 Coordinate regulations across agencies and levels of government.
I.1 Connect across sectors and determine the best way to engage different private entities (Public Sector Lead).

Creating connections across sectors requires direct outreach from the public sector and benefits significantly from pre-emergency relationships. Ideas below can be used to make connections and determine how best to engage different groups during an emergency.

**Potential Challenges to be Addressed**
- Public sector may not know how to engage private sector partners.
- Proliferation of business associations, like multiple Chambers of Commerce, hinders the dissemination of information.
- Private sector may have difficulty getting information from the public sector.

**First Steps**

**Public Sector.** Identify private sector partners and determine how best to communicate with them. Because not all businesses can be engaged directly and not all business sectors or geographies are represented by business associations, chambers of commerce, or other organizations, it is important to segment your efforts to engage the business community - see guiding questions below.

**Private Sector.** Identify public sector influence points and how to communicate with them. Identify industry associations with resources and advocacy capacity who can represent collective interests.

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**Guiding Questions for the Public Sector: who and how to engage**

- Which businesses and sectors have a large number of employees or important assets that can be leveraged in the response?
- What industries, businesses drive the economy and which businesses are they dependent upon?
  - → Invite them to 15. Co-create regulations and safe workplans for continuing business operations.
- Which businesses are most vulnerable and would most benefit from outreach and resources?
  - → 14. Proactively reach out to prioritized target audiences.
- Which businesses can I reach directly?
  - → Invite them to 15. Co-create regulations and safe workplans for continuing business operations.
- Which do I need to reach indirectly?
  - → 14. Proactively reach out to prioritized target audiences.
  - → 13. Establish websites and calls to provide centralized, useful, and accessible information.

**Guiding Questions for the Private Sector: who are you reliant on?**

- Do you have an industry organization that represents your business? Who is your primary point of contact there?
- What government regulatory offices oversee your safety operations? Is this at the federal, state, county, or city level? Who are your points of contact?
- What industries, businesses, or organizations depend on your services?
- What industries, businesses, or organizations do you depend on for daily operations?
I.2 Engage select private sector entities in public-private collaborations (Public Sector Lead).

“If you invite them in and allow the private sector to be part of understanding the problem, you’ll find that they have very unique, interesting, innovative, creative ways to address it that you never thought of because they’re in the business of that. Our failing as the public sector is that we don’t ask the private sector for help. I have yet to see them deny an ask, but the government often doesn’t ask. If you just ask, they can tell you no if they want.” Stakeholder Interview

The strategies below focus on public-private collaborations to advance towards shared goals.

Potential Challenges to be Addressed

- Public and private sector entities may view themselves as opposed, rather than aligned, in finding solutions.
- The public sector may not ask for private sector assistance in solving problems, failing to leverage the region’s full set of human, technological, and financial resources.

First Steps

Public Sector. Per I.1 Connect across sectors and determine the best way to engage different private entities, identify which businesses you can and should engage with directly. Appeal to large businesses to treat the pandemic as a humanitarian crisis, broadly asking the business community to model behavior and contribute resources that will benefit everyone, including themselves. Ask marquee employers to model desired behavior, including shutting offices and moving to a remote work model if appropriate, knowing that many smaller firms will model their response on what they see others do. Once systems are set up to effectively manage donations, ask large employers to encourage their employees to donate blood, needed goods, and cash.

Private Sector. Identify ways to connect with the public sector, including existing relationships and “cold calls” to offer assistance. Emphasize the philanthropic nature of the offer, communicating that no compensation is being sought and that the contribution is seen as a civic responsibility.

Next Steps

- **Public and Private Sectors.** Collaborate to identify specific projects or urgent needs that can best be addressed via concentrated public-private collaborations. Examples could include testing and vaccine distribution; logistics, including the acquisition and distribution of PPE, food, and other supplies; and public information.

Continuing Steps

- **Public and Private Sectors.** Continue to use company networks as an efficient way to communicate to large numbers of employees and their families. Capture lessons learned from public-private collaborations and seek to strengthen relationships following the emergency.

Mini-Case Studies from COVID-19

The Washington Medical Coordination Center (WMCC) was established to triage and place COVID-19 and related patients requiring acute hospital care in an equitable manner across Washington. The WMCC is a product of ongoing collaboration between Washington Disaster Medical Coordination Centers (DMCCs) and the Northwest Healthcare Response Network. Operated 24/7 out of Harborview Medical Center, the WMCC aims to prevent any single hospital or small group of hospitals from experiencing significant COVID-19-related resource strain by balancing patient placement across the region and supporting transport coordination to hospitals with additional capacity. In addition to supporting
patient/resident placement from healthcare facilities, such as long-term care centers, the WMCC stands ready to assist hospitals at maximum capacity seeking to decompress by transferring a group of COVID-19 or non-COVID-19 patients to other hospitals for continued care.

Additional information:

- Northwest Healthcare Response Network (external link)
- University of Washington (external link)

Challenge Seattle brought together resources and expertise from Amazon, Microsoft, Kaiser Permanente, Costco, and other firms to work with the Washington State Department of Health on vaccine distribution. Case study to be developed.
I.3 Establish websites and calls to provide centralized, useful, and accessible information.
(Public Sector Lead)

Many businesses state their greatest need during an emergency is for information. The focus here is on maintaining a go-to place that others can go to for up-to-date information. Options include information sharing calls and platforms/websites. For greatest impact, information should:

- Be current, with out-of-date information deleted to avoid confusion.
- Be based on science, facts, and data, but also be useful, simple and clear, and accessible to a wide range of audiences, including in multiple languages and formats.

States and counties should strive to establish regional information sources that aggregate information so businesses with regional or multi-state operations don’t need to sit on multiple calls or go to many different websites to locate relevant information.

Potential Challenges to be Addressed

- Decentralized calls require businesses with regional or multi-state operations to attend multiple calls.
- Lack of centralized source of information on public health regulations and guidance.
- Rapidly changing guidance and guidance that is not applicable to all work situations.
- Science-based information may be inaccessible to some audiences.

First Steps

Public Sector. Establish regional calls. Establish guidance for communicating public health information effectively. Establish a structure for consolidating private sector feedback and coordinating the sharing of public health information.

Private Sector. Attend regional calls and participate in regional coordination and planning.

Next Steps

Public Sector. Establish an information portal with current information. This standing repository of information is available to those in the public and private sector who are proactively seeking out information. Consolidate and annotate publicly shared data to make it more accessible and useful to non-scientific consumers. Provide industry with messaging around public health goals and the related regulations.

Private Sector. Attend calls. Provide feedback and requests for public health information. Provide staff with messaging around public health goals and the related regulations.

Continuing Steps

Public Sector. Maintain and update portal, archiving outdated information to avoid confusion. Only current information should be searchable and displayed.

Private Sector. Monitor information portals and attend calls. Business associations transmit this information to member businesses. Consider eliminating membership paywalls during the pandemic, seeking public sector financial support for this service.
I.4 Proactively reach out to prioritized target audiences. (Public Sector Lead)

Centralized information sources established under I.3 are not effective for all audiences and should not be seen as sufficient. It is important to identify who will not be well served by passive information sharing strategies. Proactive efforts should be made to reach prioritized target audiences. These prioritized audiences are identified in I.1 Connect across sectors and determine the best way to engage different private entities and include private sector partners who are identified as either critical to the economy or particularly vulnerable to economic shocks.

Potential Challenges to be Addressed

- The hardest hit sectors with the greatest needs may also be the hardest to reach given potential language and capacity constraints.
- Supportive resources such as financial assistance or technical support may not reach their intended recipients, or may be inequitably distributed.

First Steps

**Public Sector.** Identify possible intermediaries such as business associations, chambers of commerce, contracted intermediaries, and others. See Potential Engagement Strategies, below. Identify potentially vulnerable sectors and populations, which may include limited English proficiency communities, immigrants and refugees, small business owners, and rideshare drivers and other gig workers. Establish clarity of Mission: who will you seek to assist considering economic conditions, pre-existing vulnerabilities, and the availability of other resources.

**Private Sector.** Business Associations: Recruit businesses to network to expand the reach of information sharing.

**Next Steps**

**Public Sector.** Establish capacity and streamlined processes for translating materials into target languages, seeking to reduce the time lag between publication of timely materials in English and their publication in other languages.

**Private Sector.** Business Associations: Consolidate information requests of the public sector.

**Continuing Steps**

**Public Sector.** Listen and respond to information requests from the private sector, adapting what is delivered based on the interests of the business sector. Invite businesses to I.5 Co-create regulations and safe workplans for continuing business operations and II.1 Maintain business-critical government services.

**Private Sector.** Business Associations: Continue to ask for and disseminate information.

Potential Engagement Strategies

- Engage business associations, chambers of commerce, neighborhood business districts, business networks, and others.
- Contract with intermediaries who are well suited to reach target populations. Flexibility in existing contracts with community-based partners can allow for more seamless contracting.
- Emails distributed to businesses directly, including contacts gathered through business license applications.
- Advertisements in business- and mainstream media.
- Multi-media efforts to reach audiences who consume information in different ways, including fact sheets and short FAQs, audio recordings, videos, phone help lines, and in-person events.
1.5 Co-create regulations and safe workplans for continuing business operations. (Public Sector Lead)

Public and private sector entities can work together to establish regulations and workplans that reduce disease spread while allowing the safe continuation of work. While the public sector retains regulatory authority and responsibility, business involvement in this process can lead to creative and targeted solutions that enable businesses to survive, services to be offered, and wages to be earned.

Potential Challenges to be Addressed

- In-person industries indiscriminately shutdown in broad efforts to prevent spread of the virus.
- Regulations created without industry participation are poorly received.

First Steps

Public Sector. Convene a coordinating body with multi-agency and industry representation to understand industry challenges and coordinate the regulatory environment.

Private Sector. Engage with public/private sector coordinating body. Conduct outreach to understand industry challenges and needs.

Next Steps

Public Sector. Conduct outreach to sectors experiencing closures. Encourage and support industry in developing safe work plans by providing funding, templates, and technical assistance. Consider using relief funds to pay private sector business continuity managers to develop safe workplans for their own industry and for other industries, including those without paid professionals in such roles.

Private Sector. Engage public and occupational health and safety professionals to develop industry- or business-specific workplans. Coordinate development and sharing of plans through industry associations.

Continuing Steps

Public Sector. Give guidance and feedback on workplans to guide better implementation.

Private Sector. Implement and adjust work plans as new information is learned about the virus.

The construction industry provides an excellent opportunity to deploy this strategy as outlined in C.1 Provide rapid-response guidelines to allow for the safe, early operation of construction-related businesses.
1.6 Coordinate regulations across agencies and levels of government. (Public Sector Lead)

Many industries are impacted by regulations from multiple agencies or levels of government with jurisdiction over their activities. The Food and Drink Sector is a good example, with regulation by public health and alcohol control agencies, as well as agencies with general oversight over businesses.

Potential Challenges to be Addressed
- Industries or businesses that are affected by multiple regulatory agencies may suffer if regulations are not coordinated.
- Conflicting or competing regulations create uncertainty within business communities.

First Steps
- **Public Sector.** Establish inter-agency connections and communications channels. Create a single point of contact to receive and share industry input.
- **Private Sector.** Provide input about industry needs and requests for regulatory coordination.

Next Steps
- **Public Sector.** Coordinate regulatory changes to support public health and the safe continuation of economic activity in alignment with efforts to **1.5 Co-create regulations and safe workplans for continuing business operations.** Consider an implementation timeline based on the phase of the pandemic, asking whether the public health situation allows time to communicate changes and for questions to be asked before new regulations go into effect.
- **Private Sector.** Promote opportunities for regulatory coordination in alignment with efforts to **1.5 Co-create regulations and safe workplans for continuing business operations.**

Continuing Steps
- **Public Sector.** Adjust regulations as new information is learned about the virus.
- **Private Sector.** Provide ongoing input.
II. Adaptations & Continuing Operations

Section Contents

II.1 Maintain business-critical government services.
II.2 Provide direct assistance.
II.3 Modify private sector business models and adopt technologies to reduce risk of infection and improve experience for customers.
II.4 Adopt remote work models where appropriate.
II.5 Support workers and address potential labor shortages.
II.6 Address potential supply chain disruptions.
II.1 Maintain business-critical government services. (Public Sector Lead)

Business operations may be halted or investments delayed if supportive public sector services are disrupted.

Potential Challenges to be Addressed

- Labor shortages or prohibitions on on-site interactions may limit the ability of the government to provide counter services or field-based services that businesses rely on.

First Steps

Public Sector. Identify government functions that are necessary for ongoing private sector activity. These are often offices with “counters” that serve the private sector, such as building and business permits.

Private Sector. Communicate dependencies to public sector partners, identifying processes that must be maintained and suggesting means of safe continuation of service.

Next Steps

Public Sector. Designate staff to be responsible for implementing online service alternatives during the public health emergency. Identify major steps in processes impacted by likely short- and long-term closures due to health restrictions. Allow for expanded electronic/email submissions of necessary plans, applications, and other documentation. Supplement existing staff capacity with third-party support as needed. Prioritize the use of field staff to critical projects. Determine needs and options to expand remote service.

Private Sector. Expand the capacity to respond to permitting and approvals through electronic submissions.

Continuing Steps

Public Sector. Review new processes to determine the feasibility of integrating online/remote options into regular operations. Improve supporting infrastructure to facilitate the use of remote options.

Private Sector. Determine long-term needs for supporting electronic submissions and online options for meeting building requirements.

The construction industry provides an excellent opportunity to deploy this strategy as outlined in C.2 Support broader implementation of online government services related to the construction industry.
II.2 Provide direct assistance. (Public Sector Lead)

*During the COVID-19 pandemic, the Paycheck Protection Program provided direct financial assistance to businesses during the pandemic. State and local governments also provided direct support to businesses, using federal pass-through dollars and/or their own resources.*

**Potential Challenges to be Addressed**

- Business solvency may be challenged by short-term cash flow gaps as demand drops or shifts, or as enterprises modify their business models.
- Businesses may also lack access to personal protective equipment and other key supplies.

**First Steps**

**Public Sector.** Inventory available business assistance resources from federal, state, and local sources. Evaluate these resources against the local economy, identifying both eligibility gaps and barriers to participation. Barriers may include complex or onerous application processes, or processes that favor applicants with strong financial records, comfort with online forms, or English language proficiency.

**Private Sector.** Business Associations: Promote assistance opportunities to member businesses.

**Next Steps**

**Public Sector.** Focus support to businesses in more impacted industries, such as hospitality and leisure as opposed to blanket first-come, first-served funding for all industries. Increase assistance to local areas that depend on the hardest-hit industries. Establish strategies to: 1) Support successful applications to available resources. This may include raising awareness (see I.3 Establish websites and calls to provide centralized, useful, and accessible information and I.4 Invest in reaching target audiences) and providing technical assistance to address identified barriers. 2) Address gaps with local resources targeted at those with the greatest need and least access to alternative resources. Consider waiving potential onerous application or reporting requirements. Consider providing access to PPE or other key supplies. Provide financial support and technical assistance for technology-based improvements that can be costly and difficult for smaller businesses to adopt.

**Private Sector.** Business Associations: Provide technical assistance to support successful applications by businesses with the greatest needs.

**Continuing Steps**

**Public Sector.** Continue to monitor and adapt as conditions change. Evaluate successes and shortcomings in reaching those with the greatest needs, making programmatic changes as appropriate.

**Private Sector.** Continue to monitor and promote access to emerging opportunities.

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**Mini-Case Study from COVID-19**

**The City of Seattle’s Small Business Stabilization Fund** was repurposed in March 2020 to provide $10,000 grants to support businesses with 25 or fewer employees, as well as workers in the hospitality industry. Significant effort was expended to retool and expand an existing program that typically served eight businesses a year on a first-come, first-served basis. In line with the City’s overarching policy to target limited resources toward those who need it the most, two-thirds of funding in each round were set aside for businesses determined to be at greatest risk. Businesses’ vulnerability was at first evaluated with the City’s Risk of Displacement Index, and later, the Race and Social Justice Index. People of color own approximately 66% of the businesses awarded in Rounds 1 to 5 and the round for restaurants and bars.
II.3 Modify private sector business models and adopt technologies to reduce risk of infection and improve experience for customers. (Private Sector Lead)

Successful businesses adapt constantly to changing market conditions. Regulations and consumer behavior may shift multiple times over the course of a pandemic as uncertainty gives way to greater knowledge and vaccines, seasons, variants, and the simple passage of time affect what consumers are comfortable doing.

Potential Challenges to be Addressed

- Changes in the regulatory environment or in consumer behavior may conflict with pre-pandemic business models, requiring substantial adaptation on behalf of businesses.
- Changing regulations and consumer behavior may create new opportunities as well as take away old revenue streams.
- Technological adaptations are challenging or costly to implement.

First Steps

Public Sector. Provide regulatory flexibility per I.5 Co-create regulations and safe workplans for continuing business operations and FD.1 FD.1 Adapt regulations and shift business model to allow safe operations.

Private Sector. Business Associations: Assemble information on regulatory conditions, changing consumer behavior, labor and supply chain conditions, and available resources.

Next Steps

Public Sector. Provide information, which is what businesses most value. What do current regulations allow and not allow? What do consumers want? What direct assistance is available and what resources exist to support business applications? Which business associations are providing information and support? Provide access to current market research describing consumer behavior. Provide individual- and group-based business support services, including training on current issues. Provide financial support and technical assistance for technology-based improvements that can be costly and difficult for smaller businesses to adopt.

Private Sector. Business Associations: Maintain current information about the operating environment and recommend best practices from businesses that have deployed successful adaptations. Provide training and technical assistance.

Continuing Steps

Public Sector. Continue to communicate changes in regulations, consumer behavior, and supportive resources.

Private Sector. Business Associations: Continue to communicate changes in regulations, consumer behavior, and supportive resources.

Questions for businesses: what are my opportunities now? Continue to adapt as conditions evolve.

- What do current regulatory conditions allow?
- What are my traditional customers experiencing? How could I best meet their needs?
- How can I leverage my assets, expertise, customer relationships for opportunities created by the pandemic?
- What adaptations should I and my employees make? See SB.1 Focus on customer service/local presence and FD.2 Address challenge of enforcement of restrictions falling on restaurant employees.
- How can you repurpose day-to-day operations to respond to pandemic needs?
● What technologies could reduce person-to-person contact to make customer operations safer?
● What functions can be done remotely? See II.4 Adopt remote work models where appropriate.
● What is my plan for employee absenteeism? See II.5 Support workers and address potential labor shortages.
● What kind of assistance do I need to continue operating?

Core business skills to cultivate in a crisis:
● Know your customer: understand current consumer desires.
● Raise awareness of your value and identity. See SB.1 Focus on customer service and local presence.
● Seek new opportunities, but don’t stray from your foundational value and core competencies.
● Strengthen communication and relationship building with your employees, recognizing your mutual dependency. See II.5 Support workers and address potential labor shortages.
● Form mutually-beneficial partnerships with businesses serving the same market or neighborhood.
● Engage with the public sector: ask for regulatory changes, participate in procurement opportunities, apply for direct assistance.
II.4 Adopt remote work models where appropriate.

Nationally, the percentage of employees working remotely was as high as 35% early in the COVID-19 pandemic. The share was considerably higher in some smaller geographies such as Downtown Seattle and within some sectors such as Information Technology, Financial Services, Professional and Business Services, and Educational Services.

Potential Challenges to be Addressed

- Some positions may be conducted effectively from remote locations while others cannot.
- Employees may need substantial support to work remotely in an effective manner.

First Steps

Public and Private Sector Employers. Identify which positions may be performed remotely and which cannot. Provide clear parameters for remote work, including updated performance measures if appropriate; professionalism standards for video and audio participation in calls or meetings; and expectations for evening or weekend responsiveness when the barrier between home and work is eliminated. Clarify if employer-owned equipment may be brought home, including computers, monitors, and other accessories, as well as desks, chairs, and other equipment. Track it if it is. Clarify if remote work conditions allow for out-of-area locations, noting that out-of-state employment may generate considerable complications for small businesses in terms of employment regulations, benefits, and tax filings.

Next Steps

Public and Private Sector Employers. Enhance cybersecurity to address increased risk associated with greater offsite exposure to network vulnerabilities. Recognize what is not working well and seek to alleviate the negative impacts of remote work conditions. Consider impacts on collective collaboration, organizational culture, and connections with external parties, including partners and customers. Impacts may be felt differently by different individuals according to their role, tenure, workstyle, and home environment. Be vigilant of individuals who may be isolated, unproductive, exhausted, unwell, or even physically unsafe at home, all of which may be harder to spot.

Continuing Steps

Public and Private Sector Employers. Incorporate updated expectations in job description, recruiting, and onboarding processes. Evaluate tax and labor law compliance complications that may result from having workers in other states and establish appropriate employment policies. Navigate the imposition of return-to-office mandates with the flexibility that may be valued by employees.

It is important to acknowledge the cascading economic impacts of increases in remote work. As offices emptied during the COVID-19 pandemic, many downtowns experienced a dramatic reduction in activity. This led to real and perceived loss of safety, and dramatic reductions in business for restaurants and shops that cater to local workers.
II.5 Support workers and address potential labor shortages.

Potential Challenges to be Addressed

- Employees may face challenges related to closure of childcare or schools, increased elder care responsibilities, mental and physical stress.
- Labor shortages may make it difficult to hire.

First Steps

Public and Private Sector Employers. Prioritize staff safety. Identify challenges faced by employees through regular observation and engagement. Build employee confidence through aligned words and actions that acknowledge and seek to address these challenges. Identify ways to increase workplace flexibility to accommodate pandemic conditions.

Public Sector. Consider providing PPE or offering priority access to public health services (e.g., vaccinations, testing) to frontline workers in both the public and private sectors. Prioritize the safety of your own public sector workforce as much as that of vulnerable business sectors, modeling the behavior desired of private sector employers.

Next Steps

Public and Private Sector Employers. Leverage technology to maximize staff efficiency where possible. Offer benefits and support for staff as resources allow, including: flexible or secure scheduling, paid or unpaid leave to care for family members, childcare, safe transit options, mental health benefits, and remote work options. Consider all staff to be essential, redeploying staff to areas of greatest need.

Public Sector. Enhance labor protections for gig workers and other vulnerable populations. Invest in workforce education programs for highly-impacted sectors. Seek to use furloughed public and private sector employees to staff intensive response efforts such as food distribution, grant administration, or testing and vaccine distribution.

Continuing Steps

Public and Private Sector Employers. Evaluate the benefits and potential risks associated with bringing remote staff back to the office. Consider incentives and suggestions if mandates risk staff departures.

Mini-Case Study from COVID-19

Seattle entered the pandemic with a strong foundation of progressive worker protections in place. The City’s Paid Sick and Safe Time Ordinance, requiring employers to provide workers with paid leave to care for themselves or a family member, had been in effect since 2012. Seattle’s Minimum Wage Ordinance took effect in 2015 and the City’s Secure Scheduling Ordinance went into effect in 2017.

Several temporary ordinances related to COVID-19 amended existing provisions and established new supports for workers impacted by the pandemic. The City Council issued an amendment in March 2020 that expanded the eligible conditions for using PSST benefits, including if a worker’s place of business was closed for any health or safety reason. The Mayor issued an emergency rule prohibiting employers to demand proof of illness, as the overwhelmed medical sector had little capacity to provide such verification. Two new ordinances were enacted to protect gig workers:

Playbook | Public Health Infection Reduction Strategies | Cross-Sector Strategies | Sector-Specific Strategies
● The **Gig Worker Paid Sick and Safe Time Ordinance**, which went into effect in July 2020 and required paid sick leave for gig workers working for transportation network companies (such as Uber and Lyft) and food delivery network companies that arrange for delivery of groceries or prepared food using an app-based or online platform. This provision was set to expire 180 days after the end of the Mayor’s declaration of emergency.

● **The Gig Worker Premium Pay Ordinance** became active in June 2020, requiring food delivery network companies to provide at least $2.50 of premium pay for each order with a pick-up or drop-off in Seattle.

The **Grocery Employee Hazard Pay Ordinance** required grocery businesses operating in Seattle to pay an extra hazard wage of $4.00/hour for as long as the Mayor’s declaration of emergency is in effect.
II.6 Address potential supply chain disruptions.

Businesses have become accustomed to just-in-time sourcing from a global supply chain, leaving them vulnerable to disruptions in a vast network of suppliers and their employees.

Potential Challenges to be Addressed

- Pandemic-related disruptions to supply chains can provide significant delays of inputs that are important to business operations.
- While global and national disruptions may be outside of the control of state and city governments, supporting regional and local logistics and providing support to critical local businesses can address some potential obstacles.

First Steps

**Public Sector.** Task specific staff with responsibilities for overseeing local/regional supply chain issues. In cooperation with the private sector, identify critical regional and local suppliers that may be impacted by public health restrictions. Develop options for allowing critical suppliers and other components of the supply chain to be operating early, potentially with reduced capacity and more stringent on-site public health measures.

**Private Sector.** Coordinate with the public sector to identify critical regional and local connections in the supply chain that would disrupt activities if disrupted. Work to identify and secure alternative suppliers and supply chains if existing alternatives are disrupted. Provide clear communications with clients about the impacts of potential disruptions.

► Next Steps

**Public Sector.** Enact measures for critical elements of the supply chain to maintain supplies. Provide for increased coordination with suppliers, transportation and warehousing firms, and other partners to monitor the supply chain for any potential delays or disruptions. If disruptions to the supply chain do occur, work with regional, national, and global partners to determine options for providing alternatives.

**Private Sector.** Increase coordination with suppliers and other supporting businesses to identify potential slowdowns or delays in providing necessary inputs. Review options to use alternative inputs to reduce impacts of shortfalls.

► Continuing Steps

**Public Sector.** Maintain long-term monitoring of supply chain activity to highlight ongoing challenges that may occur as a public health emergency becomes endemic or long-term impacts to supply chains are realized.

**Private Sector.** Evaluate options to contract with regionally-based suppliers, reducing the vulnerabilities inherent in global supply chains.

The construction industry provides an excellent opportunity to deploy this strategy as outlined in C.3 Implement measures to secure critical construction supply chains.
Focus Sector-Specific Strategies

This section supplements the cross-sector strategies described above with sector-specific context and strategies for the Focus Sectors listed below. These Focus Sectors were selected based on their importance to the Puget Sound economy.

Section Contents

- Construction
- Manufacturing
- Transportation & Warehousing
- Information Technology
- Food Services & Drinking Places
- Small Businesses
Construction

Challenges of the COVID-19 Pandemic

With respect to the COVID-19 pandemic, there were several major considerations that impacted the sector and should be evaluated as part of future responses.

Treatment of the sector as “non-essential.” Although the construction industry faced distinct challenges in meeting timelines to address necessary construction projects, the sector was considered to be “non-essential” under Washington state regulations. This meant that there was a shutdown of construction activity across the state early in the pandemic, though other states classified construction as “essential.” Coordination among the state, the construction industry, labor unions, and other interests were critical in allowing employees to return to work sites with increased preventative measures in place.

Disruptions to construction supply chains. The effect of the pandemic on supply chains also had a considerable impact on the ability for businesses to continue working on construction projects. These impacts are multidimensional, ranging from impacts of lockdowns on local inputs such as concrete to delays with accessing building materials that need to be shipped from other regions or countries (e.g., softwood lumber from Canada).

Impacts on supporting government services. Government services are necessary requirements for construction projects, the disruption of which can result in significant delays. In many jurisdictions, permits and documentation that must be filed with local governments prior to construction could not be submitted in-person or reviewed and approved in a timely fashion. Similarly, after construction was complete, the capacity for local governments to issue certificates of occupancy and other final approvals for construction was impacted by the lack of available inspectors to visit job sites.

Uncertainties regarding financing and future demand. As with many other sectors, the pandemic resulted in significant uncertainties with regard to future demands for the products of the construction sector. Construction is a very capital-intensive business, requiring significant financing and substantial lead times to plan projects. For some construction projects, the pandemic led to greater difficulties in securing financing, and often resulted in projects being deferred or canceled.

Specific Considerations for the Construction Sector

The following factors will influence the applicability of cross-sector strategies to the construction sector:

- The construction industry is composed of a range of businesses, from large multinational construction companies to small businesses including builders and contractors. Providing a solution for the sector requires acknowledging that policies and programs will need to meet the needs for a range of business sizes. Consider this with regard to I.1 Connect across sectors and determine the best way to engage different private entities and I.4 Proactively reach out to prioritized target audiences.

- The nature of construction is such that some (but not all) activities can be conducted with social distancing and reduced staffing levels on site. In tandem with targeted interventions to reduce transmission, construction activities are likely to be able to continue before many other types of business activities. Consider this with regard to I.6 Coordinate regulations across agencies and levels of government.

- The sector must meet requirements under local building regulations at key points in the process, including permit reviews and final inspections. This means that construction activities will be significantly impacted by disruptions to permit review and inspection times with local governments. If the construction industry is to be supported, these functions should be prioritized in II.1 Maintain business-critical government services.
• Construction activities are more strongly impacted by supply chain disruptions than many other sectors given the amount and range of inputs necessary for construction projects. While there may be limited options available for nationwide and international disruptions to supply chains, ensuring that local logistics and manufacturing can support their share of necessary inputs will be essential to II.7 Address potential supply chain disruptions.

• Given the magnitude of the capital assets involved with the construction sector, planning for targeted support to allow the sector to continue to function can result in significant and positive economic effects.
C.1 Provide rapid-response guidelines to allow safe, early operation of construction-related businesses.

Potential Challenges to be Addressed

- Restrictions on on-site labor at construction sites may not be as applicable as in other sectors given the potential for social distancing and reduced workforces on site.
- Delays with construction projects caused by a full lockdown and closure of work sites can result in considerable costs to investors and contractors and can impact the delivery of new building stock in growing communities.

First Steps

Public Sector. Coordinate meetings with representatives from labor unions and the construction industry to determine appropriate on-site measures to control transmission. Target initial financial support to advance these interventions.

Private Sector. Participate in meetings with the public sector on early interventions and provide clear insights on appropriate interventions that would be necessary to ensure worksite safety. Implement key measures in partnership with the public sector, and ensure that they are effective on the ground through regular review. Minimize on-site personnel and implement contact tracing.

Next Steps

Public Sector. Coordinate oversight of the collection of workplace health statistics to determine whether interventions are effective or would need to be adjusted over time. In cases where measures have not decreased transmission rates and do not mitigate health risks both in the workplace and the broader public, coordinate with partners to determine other options for mitigation and control of transmission.

Private Sector. Continue to coordinate on oversight and tracking of health effects by workers. Provide support to contractors, workers, and other involved groups by disseminating initial strategies, guidance documents, and other materials about recommended and required interventions. Maintain contact tracing and statistics on the effectiveness of these measures.

Continuing Steps

Public Sector. In coordination with the private sector, review available data and determine the success of the interventions used. Maintain strategies and interventions over the long-term while the risk of transmission is still a concern in the community. Relax guidelines upon guidance from public health officials once community transmission is no longer a major concern.

Private Sector. Coordinate with the public sector to understand lessons learned and maintain long-term interventions while transmission is still a risk.
C.2 Support broader implementation of online government services related to the construction industry.

Potential Challenges to be Addressed
- Construction projects depend on government services for project approvals at the start of a project, and final inspections at the end of a project.
- Restrictions on in-person and site meetings and visits to government buildings can significantly impact the ability to submit permits and receive necessary inspections and approvals.

First Steps

Public Sector. Designate staff to be responsible for implementing online service alternatives during the public health emergency. Identify major steps in permit approvals and building inspection processes impacted by likely short- and long-term closures due to health restrictions. Allow for expanded electronic/email submissions of necessary plans, applications, and other documentation. Supplement existing staff capacity with third-party support as needed.

Private Sector. Expand the capacity to respond to permitting and approvals through electronic submissions both individually and in coordination with subcontractors.

Next Steps

Public Sector. Prioritize the use of field staff to critical construction projects. Determine needs and options to expand remote virtual building inspections to provide final approvals.

Private Sector. Support the implementation of remote virtual building inspections through available technology and infrastructure.

Continuing Steps

Public Sector. Review new processes to determine the feasibility of integrating online/remote options into regular operations. Improve supporting infrastructure to facilitate the use of remote options.

Private Sector. Determine long-term needs for supporting electronic submissions and online options for meeting building requirements.
C.3 Implement measures to secure critical construction supply chains.

Potential Challenges to be Addressed

- The construction sector is very reliant on supply chains for building materials and other components, and disruptions to these supply chains can provide significant delays in projects.
- While global and national disruptions may be outside of the control of state and city governments, supporting regional and local logistics and providing support to critical local businesses can address some potential obstacles.

First Steps

Public Sector. Task specific staff with responsibilities for overseeing local/regional supply chain issues. In cooperation with the private sector, identify critical regional and local suppliers of the construction industry that may be impacted by public health restrictions. This may include businesses such as key suppliers, local concrete and building materials manufacturing, and logistics. Develop options for allowing critical suppliers and other components of the construction supply chain to be operating early, potentially with reduced capacity and more stringent on-site public health measures.

Private Sector. Coordinate with the public sector to identify critical regional and local connections in the supply chain that would impact building activities if disrupted. Work to identify and secure alternative suppliers and supply chains if existing alternatives are disrupted. Provide clear communications with clients about the impacts of potential disruptions.

Next Steps

Public Sector. Enact measures for critical elements of the supply chain to maintain supplies of construction materials. Provide for increased coordination with building suppliers, transportation and warehousing firms, and other partners to monitor the supply chain for any potential delays or disruptions. If disruptions to the construction supply chain do occur, work with regional, national, and global partners to determine options for providing alternatives.

Private Sector. Increase coordination with suppliers and other supporting businesses to identify potential slowdowns or delays in providing necessary inputs. Review options to provide design changes to reduce impacts of building material shortfalls on overall projects.

Continuing Steps

Public Sector. Maintain long-term monitoring of supply chain activity to highlight ongoing challenges that may occur as a public health emergency becomes endemic or long-term impacts to supply chains are realized.

Private Sector. Support long-term efforts to improve resilience in supply chains and build additional capacity to offset potential disruptions.
Manufacturing

Challenges of the COVID-19 Pandemic

The COVID-19 pandemic and associated lockdowns presented several sector-specific issues for manufacturing businesses to manage.

Diversity of activities and considerations under manufacturing. Although the manufacturing sector covers different and comparable businesses, there can be a range of needs across this category, more so than with most sectors covered in this material. Specific factors that can differ include the nature of the labor, inputs, and products; format of work environments; importance of outputs; and regulatory requirements. For example, food or medical device manufacturing may require coordinating greater safety and inspection requirements, but these efforts would be seen as more critical than manufacturing retail consumer goods during a lockdown period. This should be specifically considered in planning for these businesses.

General changes in consumer and business demand can adjust production requirements. Although there may be a consistent need for certain goods during a lockdown or other pandemic-related disruptions, consumer and business demands for products may have distinct shifts in consumption patterns. These shocks can have different effects on businesses depending on the nature of these goods and the ability for production to accommodate a shift to address these new demands.

Potential for retooling operations to meet pandemic-specific needs. While certain manufacturing businesses may face shifts in demand due to changes in consumer and business consumption, others may adjust their production to manage significant pandemic-specific needs. For example, shortfalls of sanitizers and disinfectants due to increased demands by healthcare led many businesses in alcohol manufacturing to adjust their production to meet these needs.

Upstream and downstream disruptions in supply chains. Secondary industries such as manufacturing are impacted by supply-chain disruptions in two distinct ways. First, businesses can be affected by shortfalls and delays with key inputs, which can impact production. However, internal delays caused by employee scarcity and workplace limitations can also disrupt downstream supply chains, including retail and other manufacturing businesses.

Specific Considerations for the Manufacturing Sector

The following factors will influence the applicability of cross-sector strategies to the construction sector:

- Manufacturing activities have greater flexibility and resiliency with respect to closures than other types of businesses. Many jobs, including executive and design positions, should be considered in Adopt remote work models where appropriate, while others that require a physical presence on the floor can be managed to allow for transmission control efforts.
- Supply chain disruptions, both upstream and downstream, can be major considerations for manufacturing businesses. While these disruptions can be national or even global in scale, focusing on minimizing local supply chain disruptions can be essential in maintaining these operations and delivery of key products in Address potential supply chain disruptions.
- Retooling manufacturing operations to support pandemic-related needs, such as for medical supplies and equipment, can be one option to address other shortfalls in demand. These should be coordinated to ensure that these needs are being expressed clearly to the private sector.
M.1 Identify and protect critical manufacturing operations.

There is greater diversity in the types of manufacturing activities, some of which may be considered critical (e.g., food manufacturing), while others may not. Strategies put in place need to consider that different businesses in manufacturing may have a different priority.

Potential Challenges to be Addressed

- Certain manufacturing operations will be deemed critical activities, and will need to be maintained during disruptions related to public health.
- Supporting supply chains will also need to be protected.

First Steps

**Public Sector.** Identify manufacturers who provide critical inputs that should be prioritized, including manufacturers who may **M.3 Explore retooling opportunities to meet pandemic-related needs.** Coordinate with critical industries in the manufacturing sector to determine the short-term risks of shortfalls to business inputs from impacted suppliers. Develop emergency guidance to critical manufacturing operations to keep key manufacturing businesses in operation to meet basic needs.

**Private Sector.** Task specific staff with responsibilities for overseeing critical local/regional supply chain issues in manufacturing. Coordinate with the public sector on short-term measures to keep critical operations going while maintaining workplace safety and worker health. Identify upstream and downstream businesses in the supply chain critical to short-term operations and coordinate information on expected disruptions.

Next Steps

**Public Sector.** Implement and oversee programs to maintain workplace safety while continuing critical operations. Coordinate with suppliers and businesses in warehousing and logistics to create guidelines for safe operation that support health supply chains for critical industries. Develop short-term opportunities to pair local suppliers with critical manufacturing operations.

**Private Sector.** Maintain communications with businesses both upstream and downstream on the potential for supply disruptions to critical operations. Coordinate with the public sector on ongoing challenges with supply chains and shortfalls in inputs.

Continuing Steps

**Public Sector.** Explore ongoing networking opportunities to pair local suppliers with critical local manufacturing businesses to improve resilience during emergency situations. Monitor business activities and ongoing needs to identify potential supply chain disruptions that would impact critical businesses.

**Private Sector.** Review opportunities to build resilience in the supply chain through alternative suppliers that are less vulnerable to disruption.
M.2 Minimize overall disruptions to manufacturing operations and supply chains.

Potential Challenges to be Addressed

- Manufacturing activities are strongly dependent on inputs that can be disrupted in situations related to public health.
- Businesses in the manufacturing sector are often able to operate more effectively under workplace limitations than other sectors.

First Steps

Public Sector. Meet with private sector representatives across different industries to identify options for safely operating businesses safely in a hybrid format with necessary public health controls. Identify supply chains that support local manufacturing operations that are at risk of disruption.

Private Sector. Designate employees that can work off-site and coordinate on-site labor needs with staff. Identify potential changes to business and consumer demands that would impact product demand and require adjusting production. Investigate local options for suppliers that can provide inputs that are less vulnerable to short-term disruption.

Next Steps

Public Sector. Implement and oversee programs to maintain workplace safety while continuing manufacturing activities. Note that this may include WFH arrangements for executive and design staff, site controls, social distancing for operations on the floor, and regular contact tracing. Develop opportunities to pair local suppliers with local manufacturing operations experiencing shortfalls or disruptions from other suppliers.

Private Sector. Maintain communications with businesses both upstream and downstream on the potential for supply disruptions to operations. Coordinate with the public sector on ongoing challenges with supply chains and shortfalls in inputs. Adjust production as needed to address shifts in consumer and business demand, and coordinate with the local business community and the public sector on local options for suppliers to help meet new demands.

Continuing Steps

Public Sector. Explore ongoing networking opportunities to pair local suppliers with local manufacturing businesses to improve resilience during emergency situations. Monitor business activities and ongoing needs to identify potential supply chain disruptions that would impact critical businesses.

Private Sector. Review opportunities to build resilience in the supply chain through alternative suppliers that are less vulnerable to disruption.
M.3 Explore retooling opportunities to meet pandemic-related needs.

If needs are known and communicated, some local manufacturing businesses can repurpose their operations to provide pandemic-related needs such as PPE, medical equipment, or other in-demand items.

Potential Challenges to be Addressed

- Limitations on the availability of key products due to supply chain disruptions can hinder local public health responses to control transmission and infection.
- Successful retooling may require significant investment, retraining, or regulatory changes.

First Steps

Public Sector. Identify and project critical needs for medical and public health support related to equipment and consumable supplies that would be constrained during supply chain disruptions. This would include needs for personal/household and business uses as well. Determine the necessary manufacturing operations and supply chains necessary to support local production of these critical needs. Survey firms and business associations to look for matches.

Private Sector. Explore potential options for realigning manufacturing operations to meet local public health and medical needs. Coordinate with the public sector about available capacity for meeting projected needs.

Next Steps

Public Sector. Coordinate with potential manufacturing businesses with the potential for adjusting their production to meet these needs and being designated as a critical business. Provide support for building temporary supply chains and connecting emergency manufacturers with necessary suppliers and outlets for distribution. This may include temporary waivers or exemptions from regulations that would unnecessarily restrict these operations in non-emergency situations.

Private Sector. Identify and coordinate with temporary suppliers and distribution options for products. Determine staffing requirements for emergency operations, and coordinate with the public sector on options in cases where temporary employees may be needed.

Continuing Steps

Public Sector. Ensure that processes for leveraging emergency capacity for these goods and equipment are documented and that these relationships are maintained after regular production can meet these demands. Encourage new businesses in these areas to participate in ongoing emergency preparedness programs that can leverage their capacity as needed.

Private Sector. Maintain capacity to meet emergency needs for medical and public health equipment and supplies after regular production is able to meet demand.
Transportation & Warehousing

As a critical component in both major supply chains and emerging e-commerce, the transportation and warehousing sector is key to overall logistics in the regional economy. Globally, this is also the sector that has experienced the most visible signs of disruption during the pandemic, with border closures, labor challenges, and shifts in demand all impacting regular operations.

Challenges of the COVID-19 Pandemic

The pandemic and lockdowns posed different regional issues that needed to be managed.

Transportation and logistics are a primary focus for infection control given their connections with other regions. Unlike other sectors assessed in the Roadmap, transportation and warehousing specifically manages products and services that may be provided or delivered outside of the region. Additionally, the sector includes labor that may also travel into the area from different regions and countries. As such, there is often a concern that these activities could be an avenue for transmission into the area.

Transportation and warehousing activities were strongly impacted by measures in other jurisdictions. In addition to general disruptions due to supply chain issues, transportation and warehousing were very strongly impacted by measures put in place by other states and countries. For example, trucking in the Seattle area was heavily impacted by border closures with Canada, while air and marine shipping were affected by restrictions put in place in China and other Pacific Rim countries. This meant that local policies working to assist regional logistics companies needed to be reflective of the measures put in place in these other areas.

Upstream supply chain disruptions provided increased uncertainty. Even though the economy as a whole faced uncertainty about the availability of materials and labor, logistics companies in transportation and warehousing were working to manage and mitigate these delays directly. For many businesses, these disruptions could mean significantly reduced demand during some periods and increased demand when backlogs were looking to be cleared. Given capacity limitations, this often meant a downward pressure on revenue and activity.

A rise in e-commerce increased the importance of last-mile delivery. Although overall transportation and warehousing activities were impacted by significant uncertainty, there was an increase in activity in the sector overall due to the rise of home delivery of online shopping during lockdowns. This provided alternatives to brick-and-mortar retail locations, which were often shut down or seen as a risk by the public. This significantly increased the demand for distribution hub facilities, delivery fleet vehicles, and drivers to meet these needs.

Changes in consumer and business needs plus backlogs contributed to significant changes in demand for warehousing space. Although changes in consumer demands and backlogs in supply chains and distribution represented significant disruptions to activity in this sector, this also increased the need for warehousing space. As just-in-time approaches were subject to greater disruption, there was a growing demand for inventory on hand to deal with disruptions in supply. The focus on distribution for online consumer sales also pushed warehousing towards more distributed models closer to customers, and the need to accommodate backlogs has meant that additional capacity has been needed, especially at locations close to major bottlenecks such as ports or distribution centers.

Demand for passenger transportation collapsed due to lockdowns and requirements. Although logistics are a notable part of the transportation and warehousing sector, passenger transportation was significantly disrupted during the pandemic due to lockdowns and other measures. This disruption was present across different modes of transportation, ranging from ground transportation by transportation network companies (TNCs) such as Uber and Lyft, to air and marine transportation such as airlines and cruise ship companies.
Specific Considerations for the Transportation and Warehousing Sector

The following factors will influence the applicability of cross-sector strategies to the transportation and warehousing sector:

- The interconnected nature of the sector means that infection and transmission control will be very important to public health. Likewise, this sector may be impacted by control measures put in place by other jurisdictions.
- The transportation and warehousing sector is often the most important when considering issues of logistics and supply chains as challenges within this sector can result in impacts which are felt across the entire economy.
- Many of the impacts to the sector are not just shaped by local policies, trends, and demands, but also by elements of the supply chain in other areas as well. For example, ports in the Puget Sound area may present an important connection in shipping primary agricultural products to Pacific Rim countries. In such cases, demands for logistics may depend on impacts to consumer demand and supply chains outside the region.
- Shifting labor demands present probably the greatest consideration with transportation and warehousing. In some cases, such as with airlines or cruise ships, broader measures to control infections resulted in business activity being dramatically reduced. In other cases, such as with activities with distribution hubs and last-mile delivery to consumers, demand for labor increased significantly during the pandemic.
- In cases where labor demands have changed, pivots in company activities can help to meet new needs. The clearest example of this was with TNCs that shifted to a business model focusing on last-mile delivery for restaurants and other consumer goods.
TW.1 Coordinate information exchange.

Potential Challenges to be Addressed

- Changes in requirements in other regions and countries can have a substantive impact on how locally based transportation and warehousing businesses will function.
- Information potential challenges with logistics and supply chains can be difficult for businesses to find.

First Steps

Public Sector. Task specific staff to coordinate with relevant regional businesses on supply chain issues. Coordinate with other jurisdictions to determine restrictions and regulations put into place that may impact transportation and warehousing in the region. Institute regular dialogue with regional logistics companies to discuss how conditions in other locations will impact local demands for transportation and warehousing services.

Private Sector. Develop estimates of short- and long-term needs to meet current and expected demands, and provide scenarios for situations where there are significant shifts in demand. Coordinate with the public sector, suppliers, and customers on potential challenges with capacity and scheduling that will impact the availability of goods and services.

Next Steps

Public Sector. Monitor how supply chain disruptions are impacting local facilities and available capacity in conjunction with local partners. Coordinate with other jurisdictions to address identified potential issues with logistics that may impact the region.

Private Sector. Evaluate priorities, including cost-to-serve to highlight priorities with resources, such as trucking fleets to meet demands. Continue to keep the public sector, suppliers, and customers aware of challenges with logistics, including prioritization of resources and upstream delays that may have long-term impacts.

Continuing Steps

Public Sector. Encourage long-term information sharing with other jurisdictions on logistics challenges from disruptions. Support development of connections with the public sector to provide timely information for future public health events.

Private Sector. Encourage expanded approaches for coordinating with the public sector, suppliers, and customers about supply chain issues.
TW.2 Manage capacity challenges.

Potential Challenges to be Addressed
- Substantial delays due to upstream disruptions can have ripple effects throughout the entire economy, especially with carriers that require fleet management over a broad area.
- Local and regional systems for logistics to support supply chains may not have sufficient capacity to address all business and consumer needs.

First Steps
Public Sector. Institute ways for logistics firms to collaborate with the public sector on immediate solutions to short-term capacity issues. Determine local short-term options for warehousing and storage that would require government action for permitting and regulatory approvals.

Private Sector. Coordinate an assessment of suppliers and downstream elements of the supply chain to determine the potential for disruption. Leverage short-term approaches such as contracts with third parties to make additional capacity available, including both carriers and warehousing space.

Next Steps
Public Sector. Implement emergency measures for companies working to bring warehousing space online to meet changes in demand. Help match logistics firms with alternate providers and suppliers to continue to meet needs for additional capacity.

Private Sector. Implement options in coordination with clients to leverage alternative suppliers to meet local capacity demands. Supplement longer-term shortfalls in carrier fleets through additional contracts with third-party companies and expansion of existing fleets.

Continuing Steps
Public Sector. Promote economy-wide assessments to evaluate ways of increasing resiliency and reducing costs during disruptions. Coordinate policies to help build additional capacity into local and regional logistical systems for future shocks.

Private Sector. Enhance local capacities to manage pandemic-related impacts to supply chains, including capacity to provide alternative fulfillment approaches and new technologies that would reduce public health concerns.
TW.3  Address shifts in labor needs in the sector.

Potential Challenges to be Addressed

- Changes in demands for logistics during a pandemic can result in rapidly shifting labor needs.
- Pandemic-related public health measures will also likely have significant negative impacts on the labor needs of other transportation-related businesses, such as TNCs.
- Transmission and infection during a pandemic pose a risk to meeting critical labor needs.

First Steps

Public Sector. Survey businesses in the sector on changing labor needs in the short- and long-term due to pandemic-related restrictions. Coordinate opportunities for logistics businesses with significant short-term needs to be matched with available labor. Work with transportation companies with slack capacity (e.g., TNCs) to determine additional potential demand that could be addressed. Coordinate with transportation and warehousing companies to provide strong short-term transmission/infection control measures that can protect the health and availability of critical labor.

Private Sector. Coordinate assessments of available capacity, labor needs, and shortfalls or slack capacity available. Evaluate critical short-term needs during staffing shortfalls and determine potential options for meeting immediate needs (e.g., third-party agencies, temporary workers). Implement strong infection and transmission control approaches that can protect the health and safety of critical workers. Provide support for workers in businesses with severely diminished demand, potentially through shifting product offerings or matching these workers with other employment opportunities in the sector.

Next Steps

Public Sector. Review ongoing labor shortfalls and worker needs and coordinate opportunities to match available labor with critical positions. Coordinate with businesses to determine options for hiring short- and long-term employees to meet shifting demands. Provide information and expertise to impacted businesses and workers in transportation-related businesses that are looking for short-term opportunities to shift product and service offerings.

Private Sector. Monitor ongoing labor needs as the labor impacts of shifts in demand and disruptions to supply chains become apparent. Maintain and review transmission and infection control policies and determine adjustments to help protect critical workers under changing conditions. Address further shifts and shortfalls in labor through coordination with the public sector and other approaches. Pursue immediate opportunities for automation of critical functions that would be impacted by a shortfall of labor.

Continuing Steps

Public Sector. Support transportation-related businesses working to reintegrate previous employees and attract new employees after prolonged shutdowns. Provide support for logistics businesses looking to maintain or even expand their footprint over time.

Private Sector. Identify opportunities to retain temporary staff as needed to maintain expanded operations and provide additional capacity in case of future disruptions. Coordinate restaffing of new and previous employees after public health measures are relaxed.
Information Technology

The information technology sector is composed of a number of subsectors, listed here from those with the largest national employment base to the smallest according to the Brookings Institute (external link):

- Computer systems design and related services (e.g., IBM, Accenture, and Tata Consultancy Services)
- Software publishers (e.g., Microsoft, Salesforce)
- Data processing, hosting, and related services (e.g., Amazon Web Services)
- Semiconductor and other electronic component manufacturing (e.g., Intel, Nvidia)
- Other information services (e.g., Google, Meta, Netflix)
- Computer and peripheral equipment manufacturing (including companies such as Dell, Apple, and Western Digital)

As a whole, the U.S. tech sector has grown significantly over past decades while other industries have diminished. This trend continued through the COVID-19 pandemic, with the technology sector continuing to add jobs over the course of the pandemic despite losses in the first year and albeit at a slower rate. Growth was strongest in software publishing, data processing, and information services as e-commerce increased and demand for IT services grew as other functions shifted online, accelerating a move towards a technology-based economy.

Source: Technology Association of Oregon, 2022. (external link)

The resilience of the sector during the COVID-19 pandemic was facilitated by the fact that many IT work functions can more easily be done in a remote work environment than in the service sector or other sectors which require in-person presence. Some studies show that employee productivity increased in the tech sector as remote work conditions reduced meetings, commute time, and other functions that take away time from simply coding software.

While remote work allows technology employees to “work from anywhere,” it is not yet clear that the effects of the pandemic will reduce concentrations of technology workers in urban areas, particularly the coastal cities that have long served as the nation’s tech centers. According to research by the Brookings Institute (external link), “the biggest established hubs as a group slightly increased their share of the sector’s total nationwide employment. And yet, the data in this report shows that employment growth slowed in some of the biggest tech “superstars” and increased in numerous other midsized and smaller markets, including smaller quality-of-life meccas and college towns.
Challenges of the COVID-19 Pandemic

Despite the strong performance of the IT sector during the COVID-19 pandemic, the sector faced real management challenges, including:

- Responding to increases in demand from consumer behavior and increased reliance on technology for delivery of everything from public sector business permits to contactless solutions in retail and restaurants. Similarly, a shift to remote work may increase demand for laptops, cellphones, networking devices, and other hardware.
- Effectively managing the impacts of a shift to remote or hybrid work environments, particularly over the long-term.
- Helping employees navigate disruptions in childcare, K-12 education, and transit systems.
- Increasing competition for workers and a need to focus on talent retention.
- Disruptions in global markets, affecting demand for firms that sell internationally.
- Disruptions in financial markets, affecting access to capital.
- Disruptions in supply chains, affecting both hardware manufactures and software publishers that require hardware and other inputs to support internal operations.

Specific Considerations for the Information Technology Sector

- The tech sector is not monolithic. While some tech firms serve broad, cross-sector markets, others focus on support for specific sectors. Firms that support pandemic-vulnerable sectors, such as the hospitality sector or commercial real estate market, will be negatively affected as those sectors are impacted by diminished demand. It is important to remember that some IT functions require an in-person presence and that many IT businesses have limited resources and may face the same challenges as other small businesses.
- As technology is a relatively less-regulated industry, there is less of a need to coordinate regulations across agencies and levels of government.
- While the IT sector, particularly in software-focused businesses, embraced remote work models and experienced increases in worker productivity, remote work also creates significant challenges. There are important considerations to consider in Adopt remote work models where appropriate. Given the ease with which many tech firms have adopted remote work models, the biggest challenges may be managing the potential negative long-term impacts on culture and employee retention, carefully navigating the imposition of return-to-office mandates with the flexibility valued by employees.
- While larger technology firms may be able to provide or subsidize childcare or transit options, smaller firms will need to focus on Support workers and address potential labor shortages.
- Some tech businesses must Address potential supply chain disruptions.
IT.1 Contribute to market- and policy-based solutions.

The technology sector is well-positioned to be part of the solution, in terms of the sector’s importance to the Puget Sound economy, its resources and profile, and the role technology in general can play in finding safe ways for economic, social, and educational activity to continue during a pandemic.

Potential Challenges to be Addressed

- Technology essential to the many other sectors may become even more important during a pandemic.
- The tech sector must balance market challenges, market opportunities, and civic responsibility.

First Steps

Public Sector. Identify technology sector and businesses that can contribute to the pandemic response through technology-based market solutions, public-private collaboration and problem solving, and by modeling desired behavior.

Private Sector. Begin by evaluating the impact of the pandemic on current operations. Evaluate shifting market conditions and the needs of purchasers. Determine which functions can be performed via remote work models where appropriate.

Next Steps

Public Sector. Engage the tech sector early to identify opportunities for collaboration. Engage the sector as a model: “A lot of companies have used Amazon as a litmus test, they will just do whatever Amazon does and when they have their employees return to the office.” Engage larger tech businesses, and other larger employers, as a way to efficiently communicate to large numbers of employees and their families. Call on tech employers and their employees to model desired behavior: while remote work enables them to continue operations, compliance to public health measures - including masking, social gathering limits, and social distancing - is critical for ensuring the safety and health of essential workers and those who cannot work remotely.

Private Sector. Identify opportunities to provide market- and policy-based solutions. How can we adapt our business model to take advantage of emerging conditions? How can we contribute to regional solutions, recognizing that the well-being of our employees and the sustainability of our business is tied to the region’s well-being? What is our civic responsibility, particularly if our business is faring better than other businesses?

Continuing Steps

Public Sector. Include tech businesses as you engage select private sector entities in public-private collaborations, leveraging and recognizing private sector partners’ willingness to be part of the solution.

Private Sector. Continue to evaluate the long-term changes brought about by the pandemic, adopting changes in business plans, operating models, and role in the community.

The challenges and shifts caused by COVID-19 generated many business opportunities for the tech sector:

- A shift towards tech-enabled and online solutions for everything from healthcare and mental health support to contactless service in retail and restaurants.
- A move towards online permitting and other public sector functions.
- An increased need for home-based technology to support increased e-commerce and online service delivery, as well as more home-based employment.
- An increased need for cyber security solutions.
- Opportunities to address labor shortages, supply chain disruptions, and other challenges.
Food Services & Drinking Places

Challenges of the COVID-19 Pandemic

Food and drink establishments were among the hardest hit businesses and have experienced a variety of challenges through the pandemic.

Reduced Demand and On-Site Dining Prohibitions. The restaurant industry experienced some of the most immediate and visible impacts from the COVID-19 pandemic and subsequent public health protection measures. When COVID-19 cases were discovered in the Seattle area in early March 2020, restaurants and bars experienced a sharp drop in consumer demand as customers avoided public spaces over fears of being exposed to the virus. On March 16, 2020, Washington State Governor Jay Inslee issued a proclamation prohibiting on-site consumption of food and beverages at restaurants, bars, and other similar businesses statewide. Economic impacts to the restaurant industry were rapid, widespread, and deeply felt. The National Restaurant Association estimated that, nationally in 2020, restaurants lost $240 billion in sales, more than 100,000 restaurants closed permanently or long-term, and the industry lost more than 2.5 million jobs. The employment rate in the broader leisure and hospitality industry dropped by 55% between January 15 and April 15, 2020 – in Washington State, this drop was 52%.

Lifted Restrictions, Rebounding Demand, and New Challenges. The industry’s challenges changed shape in 2021 and 2022. Throughout 2020 and early 2021, governments lifted many of the prohibitions on on-site dining. On June 1, 2020, Washington's Stay Home, Stay Healthy order expired, lifting the prohibition on on-site dining. It was replaced with a phased reopening system that tied indoor and outdoor restaurant dining capacity to several metrics related to disease burden, health care system readiness, and testing capacity and availability on a county-by-county basis. On June 30, 2021, the State lifted all on-site dining restrictions. Consumer demand for on-site restaurant dining rebounded strongly. By June 2021, numbers of on-site diners at restaurants were equal to or greater than 2019 numbers at the same time of year. This rebound in demand is reflected in sales figures as well. In 2021, food and beverage sales at all food and drinking places reached a level just shy of 2019 numbers after a steep drop-off in 2020. This was driven by a combination of 1) a partial rebound in demand for full-service restaurant experiences and 2) a surge in demand for food and beverages from limited service restaurants, which exceeded 2019 sales totals by $30 billion in 2021.

As conditions allowed a return to dining, restaurants continued to face significant challenges:

- Hiring and retention challenges. Many employees left the restaurant and food service industry, affected by challenging work conditions and opportunities in other sectors. Owners reported that recruiting and retaining employees was among their top challenges in 2022, and two-thirds of restaurant operators say they have reduced business hours because of labor shortages. Many restaurant operators raised wages and expanded benefits and many offer flexible scheduling or family/elder care leave to hourly employees.
- Supply chain issues that cause shortages and higher prices for inputs. Nearly all restaurant operators reported delayed shipments or shortages of food and beverage items or equipment and service items. Nearly all said food costs were higher than they were pre-pandemic and that their profit margins were lower.
- Challenging customer interactions. Restaurant operators and staff have noted that the combination of understaffing, COVID-19-related restrictions, and fears about being exposed to the virus have resulted in more customers that are anxious, stressed, and, sometimes, confrontational with restaurant staff and other customers. This includes negative reactions to longer wait times (due to understaffing), enforcement of COVID-19 restrictions (legally required by local and state government, in many cases), and the perceived unsafe behavior of other customers (not wearing masks, sitting too close). Staff at restaurants have reported that some customers have yelled at restaurant staff, sworn and
used insulting language towards staff, left without paying for food consumed, and thrown items. See FD2. Address challenge of enforcement of restrictions falling on restaurant employees.

Specific Considerations for the Food and Drink Sector

The following factors will influence the applicability of cross-sector strategies to the food services and drinking places sector:

- Many restaurants and drinking places are small businesses. A significant share are BIPOC-owned, including by refugees and immigrants for whom communication in English may be challenging.

- Given the presence of many small businesses and BIPOC-owned businesses, restaurant and hospitality associations are particularly important in representing the interests of this sector. Consider this with regard to I.1 Connect across sectors and determine the best way to engage different private entities and I.4 Proactively reach out to prioritized target audiences.

- Given the highly regulated nature of restaurants and liquor sales, the need for coordination among agencies with regulatory authority is particularly high. In Washington State, this includes the Department of Health, Labor & Industries, and the Liquor and Cannabis Board. Consider this with regard to I.6 Coordinate regulations across agencies and levels of government.

- Due to the nature of their business and the high degree of regulation, businesses in the food and drink sector may face particular challenges in operating during a pandemic. During COVID-19, operating at reduced capacity was not financially feasible for some due to the fixed costs of opening. In addition, financial assistance was tied to businesses being under closure orders, which they no longer were when capacity-limited dining was allowed, putting restaurants in a bind.

- Restaurant owners and managers must keep up with rapidly changing regulations for their staff and customers. Industry associations may play a particularly important role in providing access to consolidated, current regulatory information, as well as recommendations and best practices.

- Many, but not all, food service workforce are relatively younger and more mobile (changing jobs more frequently). They may not work 9-5 Monday to Friday, and may use different tools to communicate with their coworkers and managers than office employees (e.g., texting and in-person, rather than by email).
FD.1 Adapt regulations and shift business models to allow safe operations.

Shifting business models can allow eating and drinking places to stay open and retain some revenue. Common adaptations during the COVID-19 included increased to-go service, outdoor dining, and takeaway liquor sales. Some restaurants went further, offering delivery and CSA boxes.

Potential Challenges to be Addressed

● Broad interventions may indiscriminately prevent continued business activity.
● Businesses may need to adapt their business models to conform to a new regulatory environment and changed customer preferences.

First Steps

Public Sector. For respiratory infections, allow outdoor seating in the right-of-way while protecting access.

Private Sector. Support industry and neighborhood business districts in making pivot to outdoor dining. See case study below. Respond to changing regulations and customer demands, pivoting towards takeout and outdoor dining.

Next Steps

Public Sector. Evaluate the comprehensive public health benefits and costs of allowing to-go alcohol sales, which can provide a substantial revenue boost to restaurants but also contribute to alcohol-related social problems.

Private Sector. Business Associations: Collaborate with public sector partners to find strategies and solutions to minimize harm from increased alcohol availability or propose other revenue generating ideas.

Continuing Steps

Public Sector. Continue to engage businesses in identifying regulatory levers to provide relief.

Private Sector. Continue to support businesses with market research on customer preferences, information about evolving regulations and opportunities, and best practices.

Mini-Case Studies from COVID-19

Regulatory Flexibility and Targeted Assistance in the City of Seattle. The Seattle Department of Transportation (SDOT) took an intentional and creative approach to allowing restaurants, as well as other retailers, to extend outdoor dining and other services onto the sidewalk or into the street. The City’s Safe Start Program was designed to allow this use while ensuring pedestrian access was preserved. SDOT staff also provided technical and financial assistance to targeted neighborhood business districts with a high percentage of BIPOC-owned businesses and relatively less access to open space to address barriers for participation and support community ideas for activating public space. Staff noted that the Safe Start Program demonstrates that outdoor dining can be successful in Seattle in non-pandemic times despite the rainy climate. SDOT relaxed other regulations that allowed outdoor merchandise displays and provided free mobile vending permits.

Canlis: A Case Study of Adaptation. Canlis, a fine dining restaurant in Seattle, launched a number of creative initiatives during the COVID-19 pandemic (external link), including a drive-in movie theater in the restaurant’s parking lot; bingo; and “Canlis Community College,” an online and interactive program with cooking classes, Seattle history lessons, and outdoor activities.
FD.2 Address challenge of enforcement of restrictions falling on restaurant employees.

Potential Challenges to be Addressed

- Implementation of individual-level regulations (masking, vaccination documentation) falls to establishment employees, putting them at risk for confrontations with customers. This may be particularly challenging for small and BIPOC-owned establishments.

First Steps

Public Sector. Provide robust public communications to build support for protective measures and work to ensure the public sector is seen as responsible for creating regulations that businesses and their employees must comply with.

Private Sector. Businesses: provide training and support for staff; back staff up by maintaining enforcement and banning problematic clients.

Next Steps

Public Sector. Provide training and technological assistance for business associations, businesses, and their employees.

Private Sector. Business Associations: provide training and technical assistance for member businesses and their employees.

Continuing Steps

Public and Private Sectors. Seek to I.5 Co-create regulations and safe workplans for continuing business operations, identifying opportunities to modify regulations and adapt safe workplans that relieve burden on clientele and staff.
FD.3 Direct food waste and industry resources to areas of need.

Potential Challenges to be Addressed

- Surplus food or food waste may not be redistributed to meet current needs.
- Restaurants may see diminished sales at the same time that the volume of public sector food assistance is increased.

First Steps

Public Sector. Coordinate with the emergency system so food waste from restaurants that are shutting down or serving a diminished volume can be used.

Private Sector. Identify surplus resources and employees that can be deployed to meet emergency needs.

Next Steps

Public Sector. Contract with local restaurants to provide food services for emergency workers and people experiencing food insecurity.

Private Sector. Business Associations: Promote opportunities to participate in emergency food aid contracting and philanthropic giving.

Continuing Steps

Public and Private Sector. Continue to seek opportunities to deploy scarce resources and employ hospitality staff to meet emergency needs.
FD.4 Leverage technology to reduce risk of infection and improve experience for customers.

During the COVID-19 pandemic, many technological innovations were implemented to reduce contact-based transmission and address potential staffing shortages, including:

- Online ordering for pick-up and delivery orders.
- Digital menus for on-site orders.
- Web-based reservations.
- Mobile POS tools that can be brought to the customer for payment at the table.
- Cashless systems that reduced the need to make change, reconcile registers, and transport cash.

These modifications can be costly and challenging for establishments to implement (though they may come with long-term benefits) and hard for some customers to use. Rather than develop these functions independently, many restaurants access these technologies through intermediary companies. The terms offered by these intermediaries may vary, with some more costly than others.

Potential Challenges to be Addressed

- Technological adaptations may be difficult or expensive, which may be disadvantageous to smaller restaurants.
- Companies providing technology and delivery solutions may charge

First Steps

Public Sector. Provide financial support and technical assistance to support establishments making technology-based adaptations.

Private Sector. Businesses: adopt technology innovations and implement with a focus on long-term benefits (easily updated menus, etc.). Business Associations: Provide training and technical assistance.

Next Steps

Public Sector. Regulate intermediaries such as delivery services.


Continuing Steps

Public Sector. Continue to provide financial support and technical assistance.

Private Sector. Business Associations: Continue to provide technical assistance and share best practices.
Small Businesses

Small businesses are present in most economic sectors, including the Roadmap’s Focus Sectors.

Challenges of the COVID-19 Pandemic

The vast majority of businesses in the United States have fewer than 500 employees and constitute about half of the country’s total employment base. The U.S. Small Business Administration defines small businesses as those with fewer than 500 employees. By this definition, 99.9% of all U.S. businesses are small, employing 46.4% of U.S. employees. The statistics for Washington state are similar, with nearly 50% of employees working for the 99.5% of enterprises that qualify as small businesses. Of these businesses, 97% employ fewer than 20 people.

Prior to the pandemic:
● Women made up 47.3% of workers and owned 43.2% of businesses.
● Veterans made up 5.0% of workers and owned 6.4% of businesses.
● Hispanics made up 17.6% of workers and owned 13.8% of businesses.
● Racial minorities made up 24.8% of workers and owned 19.4% of businesses

Small businesses are also uniquely vulnerable to the economic impact of the COVID-19 crisis. A study by the Federal Reserve found that only 35% of small businesses were economically healthy in 2019, prior to the impacts of the pandemic. This precondition of poor economic resiliency has been compounded by the fact that small businesses are concentrated in sectors that rely on person-to-person interaction and have been most affected by COVID-19, including accommodations and food services; educational services; arts, entertainment, and recreation; healthcare and social assistance; and retail trade. See the exhibit on the following page.

These businesses account for a disproportionate number of low-wage workers, people with less formal education, and minority business owners. This means that economic disruptions have been experienced by those least resilient to such shocks. The pandemic has been hardest felt by business owners of color, particularly Black business owners.

It is simply harder for small businesses to adapt to rapidly changing business conditions than it is for larger businesses.
● They have less capacity to track changing policies and less access to sophisticated market analysis that describes changing consumer behaviors.
● They have fewer resources to put toward expensive and challenging technological innovations.
● Many small business owners had trouble keeping up with their businesses due to childcare issues. This issue was especially prominent for BIPOC-owned businesses.
● Fewer have an online presence to support e-commerce and contactless transactions (external link). The percent of Main Street businesses with an online component increased from 37% to 44% between 2020 and 2022. In 2022, 79% of small businesses using e-commerce report that online sales bring in 25% or less of overall revenue and more than half say e-commerce accounts for less than 10% of revenue.
● Businesses focused on discretionary products will be most impacted.
Small Businesses Vulnerable to Permanent Closure

Specific Considerations for the Small Retail and Service Business Sector

The following factors will influence the applicability of cross-sector strategies to the small business sector:

- Small businesses are highly fragmented and present in every industry sector. Because of their limited resources, they are likely to be more vulnerable and to face different needs than their larger peers. A significant share are BIPOC-owned, including by refugees and immigrants for whom communication in English may be challenging. Consider these factors with regard to I.1 Connect across sectors and determine the best way to engage different private entities and I.4 Invest in reaching target audiences.

- Small businesses are more likely to be owned by non-native English speakers, which should be a consideration in I.3 Establish websites and calls to provide centralized, useful, and accessible information.

- Given their limited capacity, it will be difficult for small businesses to participate in I.5 Co-create regulations and safe workplans for continuing business operations. It will be important to ensure that the needs of small businesses are not eclipsed by those of their larger and better resourced peers.

- They may be less aware of and require more support in accessing available financial support and technical assistance through II.2 Provide direct assistance.

- Small businesses have fewer resources to put towards pandemic-related adaptations. They will require funding support and technical assistance to be successful in all adaptive strategies:
  - II.3 Modify private sector business models.
  - II.4 Adopt remote work models where appropriate.
  - II.5 Support workers and address potential labor shortages.
  - II.6 Address potential supply chain disruptions.
**SB.1 Focus on customer service and local presence. (Private Sector Lead)**

Given fewer resources than their larger peers, small businesses are generally less-well positioned to pivot to technology, including online sales. Small businesses can seek to differentiate themselves and cultivate loyalty by focusing on customer service and the fact that they are local, community-based businesses.

**Potential Challenges to be Addressed**

- Larger businesses are better resourced to move to online purchasing.
- Consumers may desire making fewer stops, which favors larger retailers with larger inventories.

**First Steps**

**Public Sector.** Share information about local trends in consumer preferences.

**Private Sector.** Update business and marketing plans, even informally, based on local consumer behavior.

**Next Steps**

**Public Sector.** Raise awareness of the importance of supporting local small businesses through brand-based messages and support for neighborhood business districts, including promotions and - when feasible - programming and events.

**Private Sector.** Train and incentivize employees about the heightened importance of providing exceptional customer service, acknowledging the difficulties posed by the pandemic. See FD.2 Address challenge of enforcement of restrictions falling on restaurant employees.

**Continuing Steps**

**Public Sector.** Continue to support efforts by businesses, business associations, and neighborhood business districts to connect to a local customer base.

**Private Sector.** Cultivate customer loyalty through marketing with personality and local appeal, loyalty programs, and, when conditions allow, in-person events. Continue to emphasize the fact that the business is local, independently owned, and dependent upon local customers for survival. Keep business hours up to date on online platforms.
SB.2 Support small businesses with information, direct financial support, and technical assistance. (Public Sector Lead)

Given the importance and vulnerability of small businesses at every scale of the economy, from national to local, the public sector is encouraged to provide direct support in the form of information, financial resources, and technical assistance.

Potential Challenges to be Addressed

- Many small businesses lack the financial resources, dedicated staff, or management sophistication to independently adapt to evolving market conditions.
- Working capital reserves are typically very small, making it difficult for small businesses to weather the economic shock of a pandemic. During the COVID-19 pandemic small and BIPOC-owned businesses were more likely to apply for funding, but less likely to receive funding.

First Steps

**Public Sector.** Establish resource portals with information about the current regulatory environment, consumer behavior, and funding and assistance opportunities that is tailored for small business, including languages other than English. Push information out via business associations, chambers of commerce, neighborhood business districts, and contracted liaisons.

**Private Sector.** Associations: share information and best practices with members.

Next Steps

**Public Sector.** Provide technical assistance for small business owners. Support them in applying for funding opportunities to which they are qualified and adapting their business for online sales, contactless transactions, and hyperlocal marketing. Work with private financial institutions, including regional credit unions, to improve access to credit, the terms and systems for which have traditionally disadvantaged business owners of color and women.

**Private Sector.** Associations: provide technical assistance to member businesses.

Continuing Steps

**Public Sector.** Streamline public sector procurement processes, incentivize small business participation in procurement, extend contract terms to provide stability, and improve payment terms, including paying receivables promptly or even ahead of schedule.

**Private Sector.** Continue to lobby for favorable financing and needed support.

Mini-Case Study from COVID-19

See the [City of Seattle’s Small Business Stabilization Fund](external link).
Key Supports: K-12 Education & Childcare

The continuation of economic activity relies on more than the health of the business community itself. Business enterprises cannot function without workers who themselves must be healthy and able to perform the duties of their job. The COVID-19 pandemic highlighted structural challenges and inequities in foundational services, including the K-12 education system and childcare industry.

The COVID-19 pandemic dramatically interrupted K-12 education for all students, particularly in the spring of 2020, when in-school learning was suspended and all students were required to study remotely. Other disruptions resulted from school building closures and occasional extended absences of teachers, staff, and students due to infection or exposure and the need to quarantine. Food supply chain issues have impacted school food programs.

While recommending a comprehensive array of strategies for the safe continuation of K-12 education and childcare services is beyond the scope of this Roadmap, we offer the following observations and recommendations.

Potential Challenges to be Addressed

- Employees were impacted by school and childcare closures. Remote education was also problematic, and when children suffer mental health from isolation, it also impacts parents.
- Many women left the workforce to take care of their children.
- While some larger businesses could offer childcare, smaller businesses generally could not.
- Childcare is also a business, with a disproportionate number of women and POC; subsidies should support, not compete with these existing providers.
- Schools and childcare centers may face increased operation costs (cleaning, pay, etc.).

Potential Strategies

- Prioritize support for K-12 education and childcare as essential to public health, including the social and mental health of children, educational outcomes, and economic well-being, including the dependence that many employees have on schools and childcare to care for their children.
- Strive to ensure that schools are the last to close and the first to open. Help schools operate safely, which could be an opportunity for public-private collaboration.
- Subsidize existing childcare providers rather than investing in public options that compete.
- Support the health and well-being of students and families through enhanced provision of food, nutrition, and mental health supports.
Pre-Pandemic Preparations

This section identifies work that can be done before the next novel pandemic or other emergency strikes the Puget Sound Region. Many of these preparations will strengthen the relationships and systems that COVID-19 have shown us to be underinvested in.

a. Invest in public-private relationships and plan public-private collaborations in advance of a crisis, building the foundations upon which public-private collaboration can occur during an emergency (public sector lead).


c. Develop pandemic continuity of operations plans, including for services that are required for ongoing private sector operations and investments (public sector).

d. Develop pandemic business continuity plans (private sector, with potential for public sector support).

e. Prepare information portals for communication during future events (public sector).

f. Build capacity for rapid translation of materials into languages other than English (public sector).

g. Establish guidance and practice sharing public health information, drawing on lessons learned from COVID-19 After Action Reviews by the CDC and others (public sector).

h. Prepare and vet potential regulations that would apply to pandemics with various characteristics (public sector lead).

i. Map out overlapping areas of regulatory authority among different agencies and different layers of government (public sector).

j. Pre-develop safe workplans (private sector lead, with opportunity for the public sector to support with guidance, funding, templates, and technical assistance).

k. Establish plans, systems, labor agreements, and cultural expectations for the redeployment of employees to areas of greatest need (both public and private sectors).

l. Pre-plan for labor shortages, maintaining strong labor-management relations and protections for labor, identifying technological alternatives, and emergency labor supplies, including the ability to reallocate employees to areas of emergent need (public and private sectors).

m. Strengthen regional economies and cultivate regional resilience. Improve resilience in supply chains and strengthen regional manufacturing and agricultural production capacity (public sector lead).

n. Pre-plan for supply shortages, identifying strategies for the disruption of critical inputs (public and private sectors).

o. Diversify downtown economies, adding housing in particular, to increase resiliency (public sector).

p. Maintain beneficial adaptations to the COVID-19 pandemic, integrating them into business plans and preparations for future emergencies (private sector).

q. Integrate virtual learning models and address inequities in access to technology and broadband access (public sector).

r. Invest in the long-term resilience and sustainability of critical systems, including public health, emergency management, hospitals, schools, and infrastructure to bridge the digital divide (public sector lead).
Thematic Learnings

The Roadmap on the preceding pages offers many ideas. Below, we offer three high level thematic takeaways.

1. **Keep the big picture in mind: consider individual and community health broadly and work across sectors.** Approach goal setting and interventions from a multidimensional perspective. In addition to focusing on disease prevention, seek to support the ability for people to make a living, learn, and socialize. All of this contributes to public health and it means that the public and private sectors have aligned interests.

2. **Care for the human beings behind the “workforce.”** Businesses with employees are reliant upon them for ongoing operations. A pandemic or other emergency may create challenges both for retention of existing employees and attraction of new staff. The COVID-19 pandemic highlighted the need to care for staff members' life needs, including childcare for those with children and mental health supports for those experiencing exacerbated stress and isolation caused by the pandemic.

3. **The most successful outcomes stem from alignment and creativity.** Novel diseases require novel solutions. Effective solutions may require breaking with tradition and pre-emergency boundaries. Give decision-makers latitude to respond creatively and with the clarity and singularity of purpose created by an emergency. Identify and break down bureaucratic barriers and complex bureaucracies. Experiment and innovate, sustaining best adaptations long after the crisis has subsided.

4. **Pre-emergency planning, investment, and relationship building are essential.** Future pandemics are a certainty and there is much that can be done to prepare. Planning is key, as are the personal relationships across sectors and across organizations that serve as the underpinnings to the best laid plans. Emergencies lay bare structural inequities and underinvestment in the very systems we rely on during emergencies. Now is the time to address structural systemic weaknesses by investing in public health, emergency management, and resilient communities and economies.