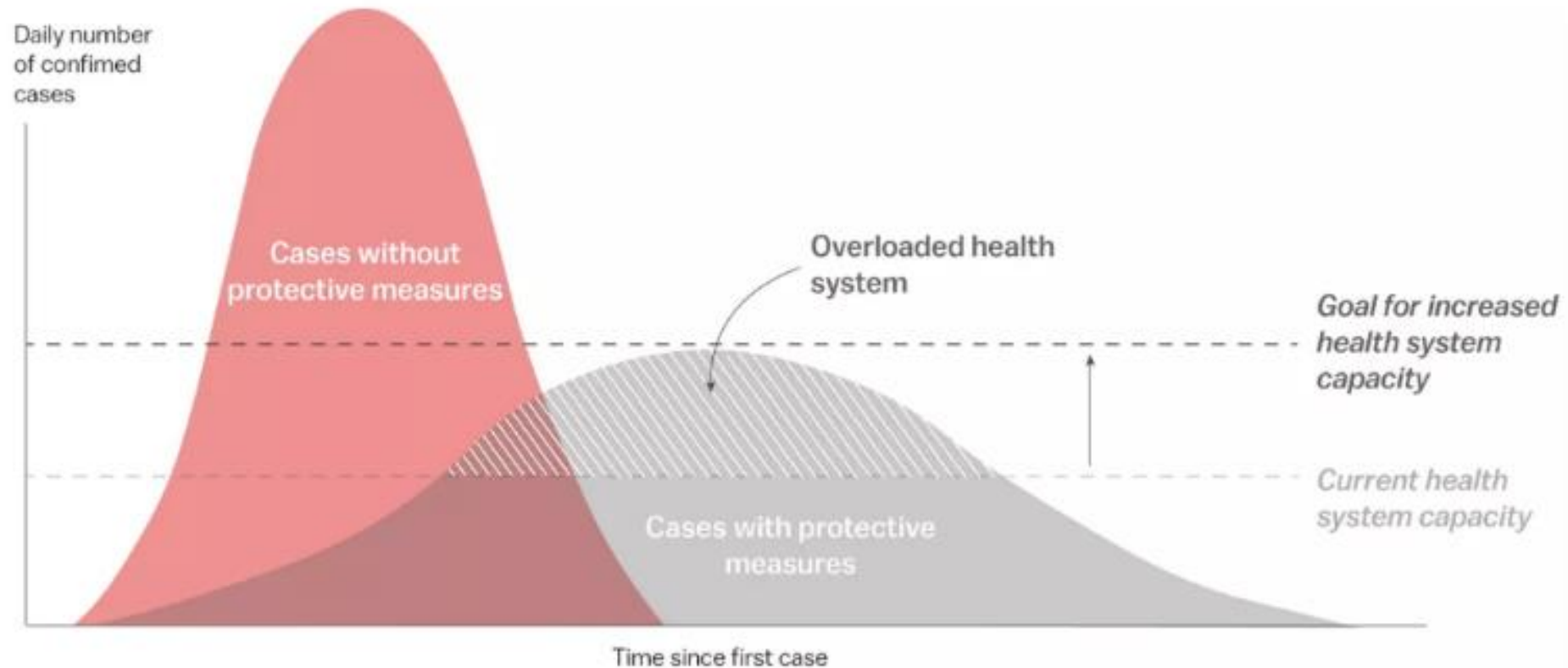




Risk-adjusted strategy for economic activity

What we know now

There is early evidence that the full national lockdown imposed since 26 March 2020 has successfully limited the spread of the coronavirus. However, there are serious risks associated with lifting lockdown restrictions too soon, or in an unsystematic and disorderly manner.





Risk-adjusted strategy for economic activity

The balance between “lives” and “livelihoods”

Evidence from the Spanish Influenza pandemic of 1918 shows that the long-run economic consequences for cities experiencing a rapid infection rate and high cumulative infections were significantly worse than those for cities enduring temporary restrictions on economic activity.

"On the one hand, NPIs constrain social interactions while they are in place, and thus necessarily depress any type of economic activity that relies on such interactions. On the other hand, because the pandemic itself has severe economic consequences, by reducing the severity of the pandemic, NPIs can mitigate the most severe economic disruptions. While an interruption of economic activity may be inevitable, this interruption can be shorter-lived and less extensive with NPIs in place that solve coordination problems." (p. 17)

**Pandemics Depress the Economy, Public Health
Interventions Do Not: Evidence from the 1918 Flu**

Sergio Correia, Stephan Luck, and Emil Verner*



Risk-adjusted strategy for economic activity

An alert system with levels of restriction

Restrictions on economic activity need to be adapted to epidemiological trends, and may need to be relaxed and tightened in different periods. An alert system should be created with clearly defined levels of restriction that can be imposed by the National Command Council as necessary.

- If lockdown regulations are amended to allow some economic activity to resume, it is possible that the infection rate will accelerate and that the virus will resurge. In this scenario, it would be necessary to quickly revert to more stringent restrictions in order to arrest further transmission.
- An “alert system” with four to five levels would allow for flexibility and responsiveness, and would reduce the need to amend regulations in future.
- At each level restrictions would be more or less severe, and sectors and companies would know what activity is permitted depending on the level imposed at any time.
- Government would be able to switch between levels with far greater speed, and could use mass communications platforms (such as an SMS notification system) to signal this to the public.
- Different levels could be imposed in specific provinces and areas based on the risk of transmission.
- **NB: A gradual transition between alert levels can be implemented where necessary.**
- Detailed health protocols should be imposed at all levels of alert.



Risk-adjusted strategy for economic activity

An alert system with levels of restriction

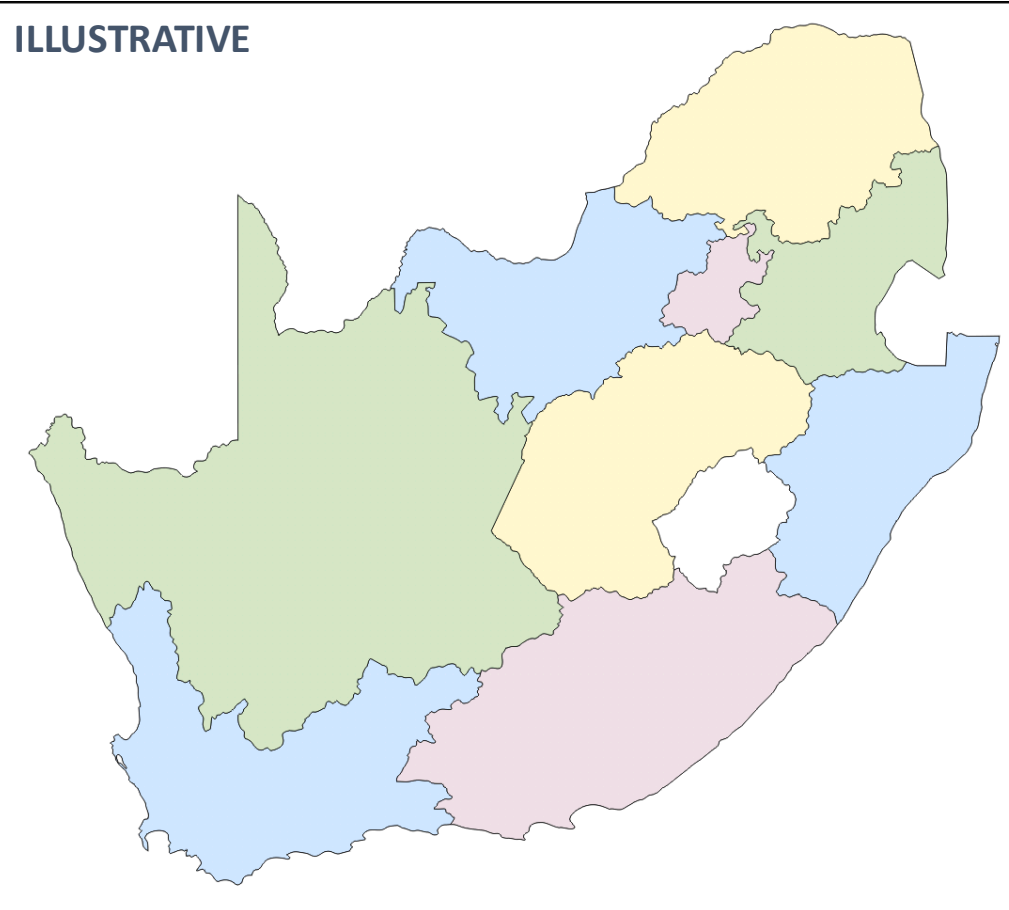
Ongoing feedback loop informs decision to remain at a particular level, relax restrictions further, or return to a higher level of restriction.

Level 1	Low virus spread, high health system readiness
Level 2	Moderate virus spread, with high readiness
Level 3	Moderate virus spread, with moderate readiness
Level 4	Moderate to high virus spread, with low to moderate readiness
Level 5	High virus spread, and/or low readiness



Risk-adjusted strategy for economic activity

An alert system with levels of restriction



Different levels of alert can be declared in specific provinces and districts based on epidemiological trends and the risk of infection.



Risk-adjusted strategy for economic activity

Criteria for return to activity

To determine which sectors should be allowed gradually to resume activity, three criteria should be used:

1. *Risk of transmission (including the ease of implementing mitigation measures)*
2. *Expected impact on the sector of continued lockdown (including prior vulnerability)*
3. *Value of the sector to the economy (e.g. contribution to GDP, multiplier effects, export earnings)*

Sectors that have a low risk of transmission (or where this risk can easily be mitigated), that would suffer most acutely from a continued lockdown in terms of retrenchments, company failures, or loss of productive capacity and international market share, and that have a high value to the economy should be prioritised.

These criteria should themselves be subject to an ordinal ranking of priority. Thus, sectors with a high risk of transmission should not be allowed to resume activity until this risk is reduced, regardless of the potential impact on their sector or their value to the economy. Among those sectors with a low or manageable risk of transmission, considerations of impact and value can be used to attribute priority.

Low transmission risk AND severe impact OR high value



Risk-adjusted strategy for economic activity

Criteria for return to activity

1. Economic value at risk

- Sectoral contribution to GDP
- Employment
- Export earnings (fx)
- Prevalence of SMEs and informal sector
- Linkages to the rest of the economy
- Is it an enabling industry?

2. Transmission risks

- Nature of work
- Profile of workforce
- Geographic location of workforce
- Practical mitigation measures
- Feasibility of mitigation measures

**Main
considerations**

3. Economic stress

- Not presently operating
- Facing imminent retrenchment
- Facing imminent firm closures
- Facing permanent and irreversible damage
- Jobs at stake

Industries that return to work first should:

1. Have acceptably **low transmission risk** (or be able to attain this through mitigation measures) **and**
2. Be of critical **value to the economy** **or**
3. Be under severe near-term **economic stress**



Risk-adjusted strategy for economic activity

Economic value of sector

Sectors	GDP contribution (%) ¹	Employment contribution (%) ²	MSME intensity ³	Economic linkage intensity ⁴	Export exposure ⁴	% operational ⁵
Other manufacturing	11.1%	7.4%	Medium	Medium	Medium	Unknown
Wholesale & retail (includes home deliveries)	7.9%	10.8%	High	High	Low	Unknown
Agriculture & food services	7.6%	4.4%	Medium	High	Medium	Unknown
Mining	6.9%	7%	Low	High	High	Unknown
Transport	6.2%	4.6%	Medium	High	Medium	Unknown
Financial intermediation	5.5%	6.9%	Low	Low	Low	Unknown
Construction (includes electrical & plumbing services)	5.0%	3.1%	Medium	High	Low	Unknown
Professional services	4.9%	5.6%	Medium	High	Low	Unknown
Real estate	4.7%	0.8%	Medium	High	Low	Unknown
Automotive	4.0%	6.1%	Low	Medium	Medium	Unknown
Post & telecommunications	2.5%	1.5%	Medium	Low	Low	Unknown
Electricity	2.3%	1.6%	Low	Medium		Unknown
Health & social work	2.2%	1.9%	Medium	High	Low	Unknown
Insurance	2.1%	2.6%	Low	Low	Low	Unknown
Petroleum refineries	1.9%	1.3%	Low	Low	Medium	Unknown
Pharmaceuticals	1.6%	1.1%	Medium	Medium	Low	Unknown
Chemicals	1.3%	0.9%	Medium	Medium	High	Unknown
Hotels & restaurants	1.0%	0.8%	Medium	Medium	Medium	Unknown
Water	0.8%	0.4%	Low	Medium		Unknown
Recreation, cultural & sporting	0.5%	0.5%	High	High	Low	Unknown
Forestry	0.2%	0.2%	Medium	Medium	Low	Unknown
Radio, TV, communication equipment & apparatus	0.2%	0.2%	High	Medium	Medium	Unknown
Fishing	0.1%	0.1%	Low	Medium	Medium	Unknown
Sewerage & waste disposal	0.03%	0.03%	Medium	Medium		Unknown

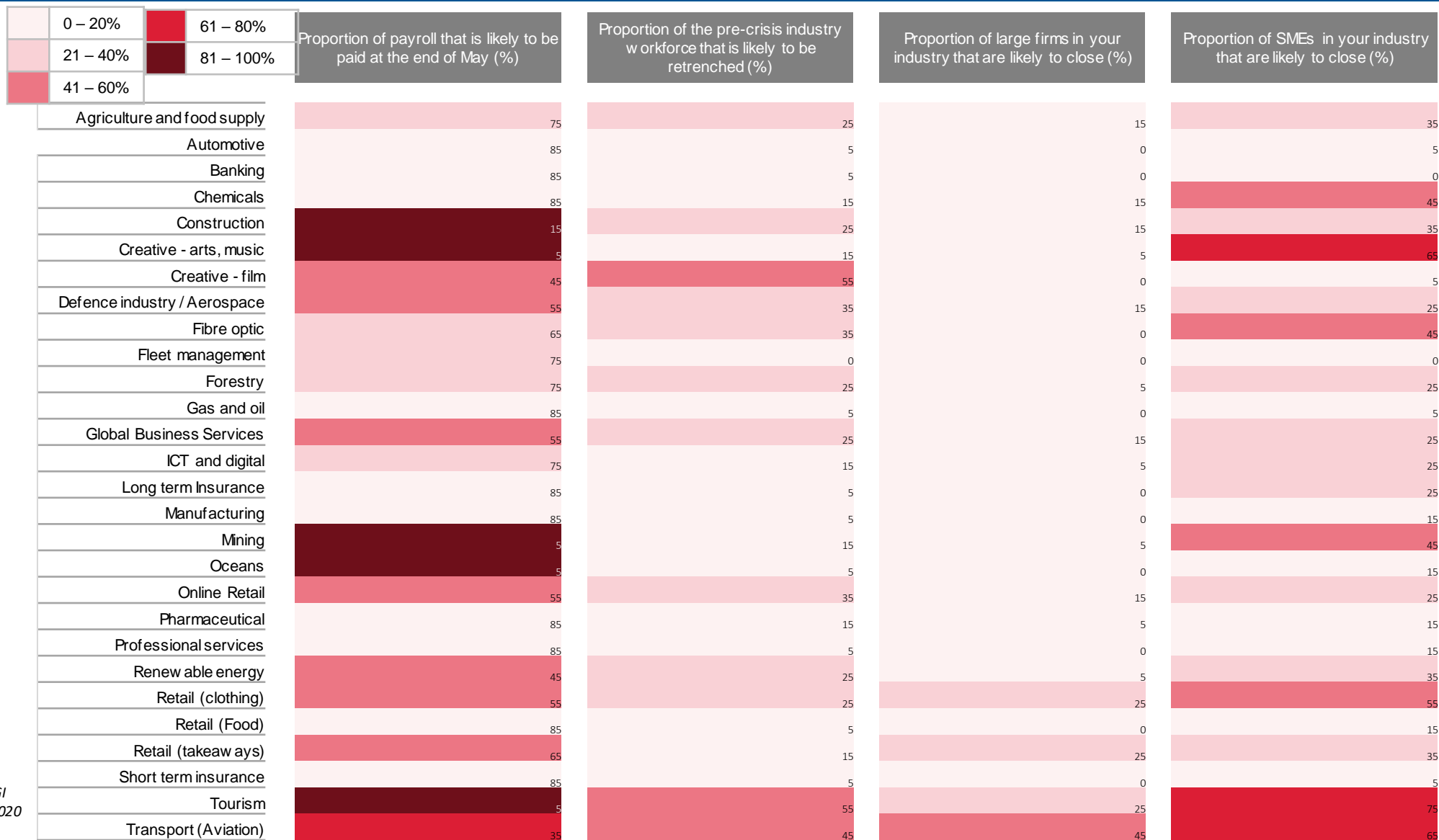
50%

1. GDP output at basic prices. StatsSA, Supply and Use Table, 2017. 2. StatsSA, Quarterly Labour Force Survey, 2017. 3. IFC, 2018. *The Unseen Sector: A Report on the MSME Opportunity in South Africa*. PPGI Industry Survey. 4. StatsSA, Supply and Use Table, 2017. 5. Self reported data from PPGI industry survey. 6. ILO. Accessed from: <https://www.bangkokpost.com/world/1819629/s-africa-still-hobbled-by-abusive-legacy-of-domestic-work>



Risk-adjusted strategy for economic activity

Expected impact of continued lockdown



Source: Self reported data from PPGI industry survey, Genesis Analytics 2020



Risk-adjusted strategy for economic activity

Risk of transmission: matrix rationale

Risk matrix for businesses				
General Guiding Criteria	High	Medium	Low	Explanatory notes
1. Nature of business requires dense public congregation of customers	<i>Exclusion</i>			<i>Certain non-essential congregation activities (mass gathering in cinemas, stadium events, large functions) per se excluded</i>
1.1 General density of interaction (inside and outside workspace)	<2 m ² per person	2-6 m ² per person	>6 m ² per person	
2. Geography of workplace(s)	High risk province & urban/metro area	High risk province OR urban/metro area OR crossing borders	Low risk province & rural area & within provincial boundaries	
3. Employees can work remotely	Less than 30%	30-60%	60-100%	All workers who can continue to work remotely must do so
For % of the workforce who cannot work remotely:				
4. Travel risk of employees	60%+ use public transport OR 20%+ crossing borders	30-60% use public transport OR 10-20% crossing borders	<30% use public transport AND <10% crossing borders	
5. Ability to separate vulnerable employees / customers	<i>Isolation for pensioners and immuno-compromised</i>			<i>Most vulnerable population groups should not enter the workspace at all (both employee and customer). Instead, treated separately and/or remotely</i>
	> 50 years (especially Male)	30 – 50 years	<30 years old	
6. Resources & capacity to implement risk mitigation measures at work	Cannot implement all mitigation measures	All those relevant, but not immediately	All those relevant, immediately	See general measures (where?)



Risk-adjusted strategy for economic activity

Risk of transmission

	Agriculture, food, beverages & tobacco	Automotive	Chemicals	Coke oven & petroleum refineries	Construction	Electricity	Financial intermediation	Fishing	Forestry	Hotels and restaurants-tourism
% of employees can work remotely	2	2	2	2	2	2	0	1	2	2
% of workforce that is older than 50	2	0	2	2	0	0	1	1	2	2
% of workforce in geographies with high transmission (GP, KZN, WC)	0	0	2	1	0	0	1	2	0	2
Ability to enforce social distancing of 2m at work	0	0	2	0	1	0	0	1	0	2
Ability to provide masks to employees	1	0	0	2	1	0	0	1	0	2
Ability to screen all employees	2	0	2	2	1	0	0	1	0	2
Ability to isolate all ill employees	0	0	0	2	1	0	0	1	0	2
% of employees who use public transport	0	1	1	2	1	2	1	2	1	2
% of employees who must cross provincial border to start work	0	0	0	0	2	2	0	1	0	2
SCORE	7	3	11	13	9	6	3	11	5	18



Risk-adjusted strategy for economic activity

Risk of transmission

	Hotels and restaurants-retail takeaways	Insurance-long-term	Insurance-short term	Mining	Other manufacturing-defence industry	Other manufacturing-manufacturing	Pharmaceuticals	Post and telecommunication-fibre optic	Post and telecommunication-ICT and Digital	Professional services
% of employees can work remotely	2	1	1	2	2	2	2	0	0	0
% of workforce that is older than 50	2	2	2	1	1	2	1	0	0	0
% of workforce in geographies with high transmission (GP, KZN, WC)	2	1	0	0	2	1	2	1	1	1
Ability to enforce social distancing of 2m at work	2	0	0	0	0	2	0	2	0	0
Ability to provide masks to employees	2	0	2	0	0	2	1	0	1	0
Ability to screen all employees	2	0	2	0	1	2	2	0	2	0
Ability to isolate all ill employees	2	0	0	0	0	0	0	0	0	0
% of employees who use public transport	2	0	1	2	0	2	1	0	0	0
% of employees who must cross provincial border to start work	2	0	0	2	0	0	1	2	1	1
SCORE	18	4	8	7	6	11	10	5	5	2



Risk-adjusted strategy for economic activity

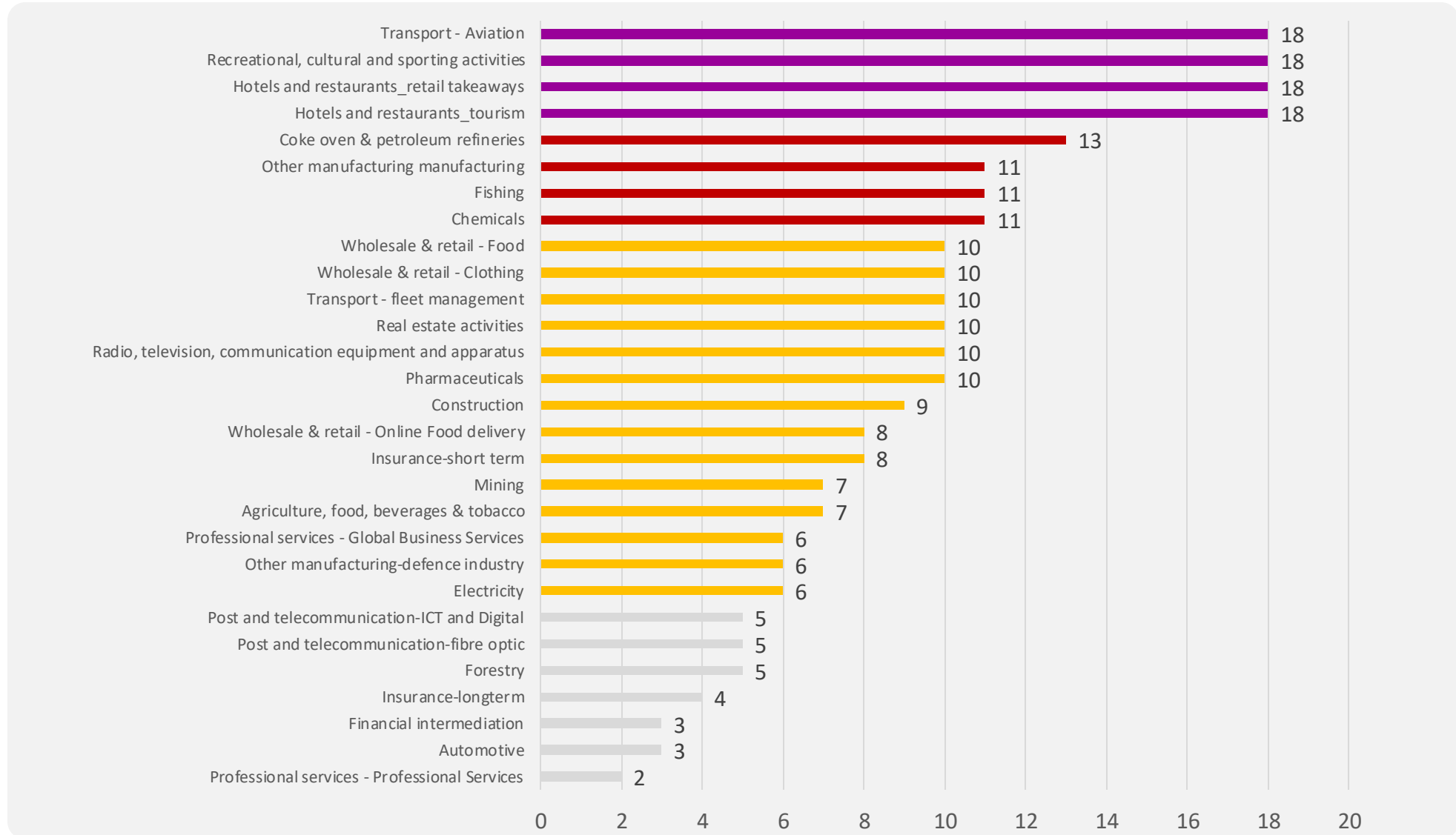
Risk of transmission

	Professional services - Global Business Services	Radio, television, communication equipment and apparatus	Real estate activities	Recreational, cultural and sporting activities	Transport - fleet management	Transport - Aviation	Wholesale & retail - Clothing	Wholesale & retail - Food	Wholesale & retail - Online Food delivery
% of employees can work remotely	1	2	1	2	1	2	2	2	2
% of workforce that is older than 50	0	1	2	2	2	2	1	1	0
% of workforce in geographies with high transmission (GP, KZN, WC)	2	1	1	2	0	2	1	1	0
Ability to enforce social distancing of 2m at work	0	2	0	2	2	2	0	0	1
Ability to provide masks to employees	0	1	0	2	1	2	0	0	1
Ability to screen all employees	0	1	2	2	2	2	2	2	1
Ability to isolate all ill employees	0	1	2	2	1	2	2	2	1
% of employees who use public transport	2	1	1	2	1	2	2	2	2
% of employees who must cross provincial border to start work	1	0	1	2	0	2	0	0	0
SCORE	6	10	10	18	10	18	10	10	8



Risk-adjusted strategy for economic activity

Risk of transmission





Risk-adjusted strategy for economic activity

Considerations for first phase of easing restrictions

Consideration	Description
Low transmission risk	Economic activity can resume with low transmission risk <i>or</i> Economic activity can resume under conditions whereby transmission risks can be effectively managed
Regulated and organised	Precedent of good compliance and enforcement of regulations in sector <i>and/or</i> Industry bodies / unions / lead firms can support coordination of sector response
Localised / low movement of people	Economic activity can resume with no/minimal movement across provincial borders and between rural and urban areas, <i>and</i> movement is limited to low risk geographies
Enabling of other sectors or essential services	Resumption of economic activity is crucial for the effective functioning of a sector that produces, distributes or sells goods / services designated as essential or other sectors prioritised for opening



Risk-adjusted strategy for economic activity

Post-lockdown: General exclusions

The following restrictions will remain in place after the national lockdown, and regardless of the level of alert at any given time:

- Sit-in restaurants and hotels
- Bars and shebeens
- Conference and convention centres
- Entertainment venues, including cinemas, theatres, and concerts
- Sporting events
- Religious, cultural and social gatherings

No gatherings of more than 10 people outside of a workplace will be permitted.

Passengers on all modes of transport must wear a cloth mask to be allowed entry into the vehicle. Hand sanitisers must be made available, and all passengers must sanitise their hands before entering. Public transport vehicles must be sanitised on a daily basis.



Risk-adjusted strategy for economic activity

Rules applicable across all levels

The following rules will be imposed across all sectors and alert levels:

- Industries are encouraged to adopt a work-from-home strategy where possible, and all staff who can work remotely must be allowed to do so.
- Workers above the age of 60, as well as workers with comorbidities identified by the Department of Health should be offered a work-from-home option or allowed to remain on leave with full pay.
- There should be workplace protocols in place that would include disease surveillance and prevention of the spread of infection.
- All employers to screen staff on a daily basis for symptoms of COVID-19, including a symptom check as well as temperature assessment.
- All employees to use a cloth mask especially where social distancing is not possible.
- Work environment to have sanitisers available or hand washing facilities with soap.
- Stringent social distancing measures should be implemented in the workplace.

The Department of Health will issue a comprehensive guidance note stipulating health and safety practices for returning to work.



Risk-adjusted strategy for economic activity

Additional rules pertaining to sectors and firms

Before any sector resumes activity, the following conditions must be in place:

- In addition to generally applicable health and safety protocols, each sector must agree upon a COVID-19 prevention and mitigation plan with the Minister of Employment and Labour, the Minister of Health and any other Minister relevant to the sector.
- Individual businesses or workplaces must have COVID-19 risk assessments and plans in place, and must conduct worker education on COVID-19 and protection measures:
 - Identification and protection of vulnerable employees
 - Safe transport of employees
 - Screening of employees on entering the workplace
 - Prevention of viral spread in the workplace:
 - Cleaning of surfaces and shared equipment
 - Good ventilation
 - Managing sick employees
- Monitoring systems must be in place to (1) ensure compliance with safety protocols and (2) identify infections among employees



Risk-adjusted strategy for economic activity

Governance framework

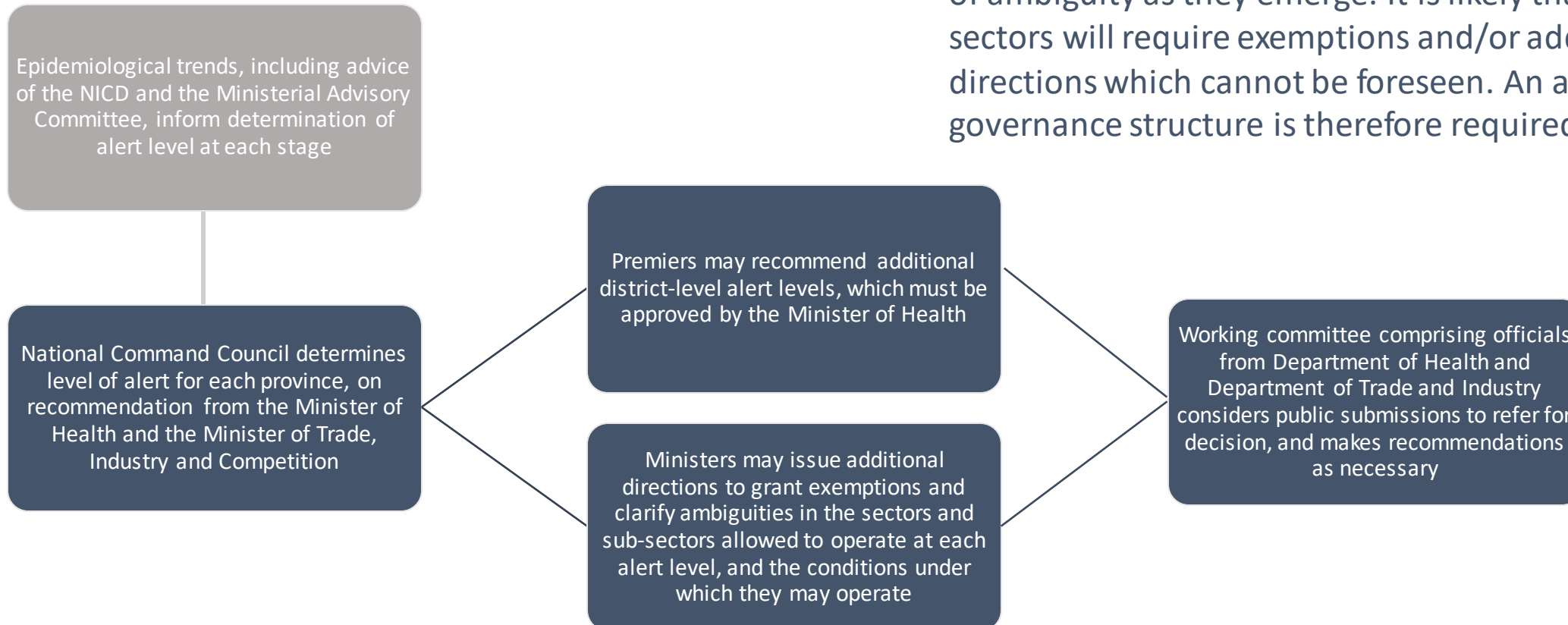
- Levels of alert (1-5) will be determined by the National Command Council at each meeting, upon a recommendation from the Minister of Health and the Minister of Trade and Industry. **A single national alert level may be determined, or an alert level may be determined for each province.**
- The highest burden of the disease is currently concentrated in Gauteng, Western Cape, KwaZulu-Natal and Eastern Cape. The remaining provinces have a limited number of cases.
- Within the provinces the infection is concentrated largely in the metro areas.
- Given the disproportionate distribution of infections there is an opportunity to have a differentiated approach to the lockdown based on the geographic distribution.
- The initial plan is to determine alert levels at a provincial level based on the number of cases in each province.
- Premiers may thereafter determine an alert level for specific districts, with the approval of the Minister of Health. Those districts with lower risk levels could in this way embark on increased levels of economic activity.
- **Individual Ministers, upon consultation with and approval from the Minister of Health, may provide for exceptions and additional directions in sectors within their domain.**
- A working committee should be established comprising officials from the Department of Health and the Department of Trade and Industry to consider changes to the sector restrictions as they are required.



Risk-adjusted strategy for economic activity

Governance framework

The framework should remain responsive to epidemiological trends as well as to problems and areas of ambiguity as they emerge. It is likely that specific sub-sectors will require exemptions and/or additional directions which cannot be foreseen. An adaptive governance structure is therefore required.





Risk-adjusted strategy for economic activity

Alert system: Level 5

	Sectors permitted	Transport restrictions	Movement restrictions
Level 5: High virus spread, and/or low health system readiness	Only essential services	Bus services, taxi services, e-hailing and private motor vehicles may operate at restricted times, with limitations on vehicle capacity and stringent hygiene requirements	No inter-provincial movement of people, except for transportation of goods and exceptional circumstances (e.g. funerals)



Risk-adjusted strategy for economic activity

Alert system: Level 4

	Sectors permitted	Transport restrictions	Movement restrictions
Level 4: Moderate to high virus spread, with moderate readiness	<p><i>All essential services, plus:</i></p> <p>Food retail stores already permitted to be open permitted may sell full line of products within existing stock</p> <p>All agriculture (horticulture, export agriculture including wool and wine, floriculture and horticulture, and related processing)</p> <p>Forestry, pulp and paper</p> <p>Mining (<i>open cast mines at 100% capacity, all other mines at 50%</i>)</p> <p>All financial and professional services</p> <p>Global business services for export markets</p> <p>Postal and telecommunications services</p> <p>Fibre optic and IT services</p> <p>Formal waste recycling (glass, plastic, paper and metal)</p>	<p>Bus services, taxi services, e-hailing and private motor vehicles may operate at all times of the day, with limitations on vehicle capacity and stringent hygiene requirements</p>	<p>No inter-provincial movement of people, except for transportation of goods and exceptional circumstances (e.g. funerals)</p>



Risk-adjusted strategy for economic activity

Alert system: Level 3

	Sectors permitted	Transport restrictions	Movement restrictions
<p>Level 3: Moderate virus spread, with moderate readiness</p>	<p>Licensing and permitting services, deeds offices and other government services designated by the Minister of Public Service and Administration</p> <p>Take-away restaurants and online food delivery</p> <p>Liquor retail within restricted hours</p> <p>Clothing retail</p> <p>Hardware stores</p> <p>Stationery, personal electronics and office equipment production and retail</p> <p>Books and educational products</p> <p>E-commerce and delivery services</p> <p>Clothing and textiles manufacturing (<i>at 50% capacity</i>)</p> <p>Automotive manufacturing</p> <p>Chemicals</p> <p>Bottling</p> <p>Cement and steel</p> <p>Machinery and equipment</p> <p>Global Business Services</p> <p>SANRAL construction and maintenance</p> <p>Transnet at 100%</p>	<p>Bus services, taxi services, e-hailing and private motor vehicles may operate at all times of the day, with limitations on vehicle capacity and stringent hygiene requirements</p> <p>Limited passenger rail restored, with stringent hygiene conditions in place</p> <p>Limited domestic air travel, with a restriction on the number of flights per day and authorisation based on the reason for travel</p>	<p>No inter-provincial movement of people, except for transportation of goods and exceptional circumstances (e.g. funerals)</p>



Risk-adjusted strategy for economic activity

Alert system: Level 2

	Sectors permitted	Transport restrictions	Movement restrictions
Level 2: Moderate virus spread, with high readiness	Construction All other retail All other manufacturing Mining (<i>all mines at 100% capacity</i>) All government services Installation, repairs and maintenance Domestic work and cleaning services Informal waste-pickers	Domestic air travel restored Car rental services restored	Movement between provinces at Level 1 and 2 restrictions



Risk-adjusted strategy for economic activity

Alert system: Level 1

	Sectors permitted	Transport restrictions	Movement restrictions
Level 1: Low virus spread, high health system readiness	All sectors	All modes of transport, with stringent hygiene conditions in place	Interprovincial movement allowed, with restrictions on international travel



Proposal for phased economic recovery

Recommendations

- A system of “alert levels” should be adopted, and further work done to determine which sectors (and under what conditions) may operate at each level. The Department of Trade and Industry and the Department of Health should collaborate to develop this system.
- To make the determination of which sectors should be allowed to resume activity at each level of alert, three criteria should be considered:
 - Risk of transmission (including the ease of implementing mitigation measures)
 - Expected impact on the sector of continued lockdown (including prior vulnerability)
 - Value of the sector to the economy (e.g. contribution to GDP, multiplier effects, export earnings)
- A decision about whether to institute a lower alert level should be made by the National Command Council based on evidence gathered during this week about the spread of the virus.



Thank you