



Project Sunrays

Getting ready for COVID-19 vaccines logistics by air

Project update – 8 December 2020



Steering group composed by Board members from TIACA and Pharma.Aero

Sunrays: shining a light on COVID-19 vaccines transport requirements and airfreight readiness



■ Collecting insights

- Research and compilation of information, available on public domain
- One-to-one interviews with vaccines manufacturers and pharmaceuticals logistics professionals
- Industry survey to collect insights from airfreight sector on capabilities, readiness, concerns and needs
- Weekly engagement with vaccines manufacturers

■ Providing value

- Analysis and deep-dive investigation on specific areas
- Expertise, guidelines and recommendations
- Industry mobilization and collaboration for greater reach and impact

Unprecedented challenges: exceptional circumstances in the pharma world impacting logistics

Fast-track development of vaccine(s)

Limited time for logistics players to strategize, invest, deploy adequate infrastructure and develop required skills and processes



Many types of vaccines and manufacturers in the race

Long list of unknowns for logistics experts impacting their level of preparedness.



Insights from pharma industry

- **One-to-one interviews and weekly engagement** with vaccines manufacturers
- **Research** and compilation of information, available on public domain



Sunrays white paper will be released in the coming days

- **Outcomes of research and engagement with vaccines producers**
 - COVID-19 vaccines logistics specifications
 - Where are the COVID-19 vaccines being produced?
 - Vaccines distribution models
- **Outcomes of research on purchasing deals, countries' procurement strategies and allocation principles**
 - Vaccines purchasing deals
 - National procurement strategies
 - COVAX Facility
 - Who will get the vaccines first?
- **Outcomes of the 2 airfreight readiness surveys run in September and November 2020**
- **TIACA and Pharma.Aero joint call to action**

9 detailed fact sheets

- Astra Zeneca / University of Oxford
- CanSino Biological Inc. / Beijing Institute of Biotechnology
- The Gamalyea Research Institute of Epidemiology and Microbiology
- GSK / Sanofi Pasteur
- Johnson & Johnson
- Moderna
- Novavax
- Pfizer / BioNTech
- SinoVac

The race for EUAs is on going

Firstpost

Publication 05 DEC 2020

Bahrain becomes second nation after UK to allow emergency use of Pfizer COVID-19 vaccine

In November, Bahrain had already granted emergency-use authorization for a Chinese vaccine made by Sinopharm and has inoculated some 6,000 people with it

BUSINESS INSIDER

Americans could start getting COVID-19 vaccines as early as Friday, an FDA advisor says

- The US could start giving COVID-19 vaccinations as Friday, according to James Hildreth, a Food and Drug Administration (FDA) vaccines advisor.
- If the FDA gives an emergency use authorization to vaccine after a meeting of experts Thursday, American

mint



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COVID-19 Pandemic

Russia Begins Coronavirus Vaccination Program

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By VOA News

Updated December 05, 2020 03:41 PM

THE STRAITS TIMES

Pfizer said t
emergency
19 vaccine i

The New York Times

Covid-19: The World Watches as Russia and Britain Lead the Way in Mass Vaccinations

Last Updated Dec. 7, 2020

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covid

stitute has applied for
e-in-India covid

THE STRAITS TIMES

Indonesia gets 1.2 million Covid-19 vaccine doses; rules on distribution to be finalized in 2 weeks

Publication 07 DEC 2020

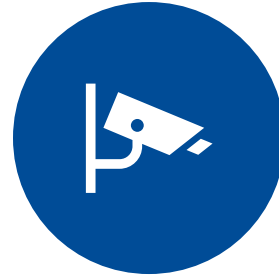
What shippers want from their logistics providers



INTEGRITY



SPEED



SECURITY



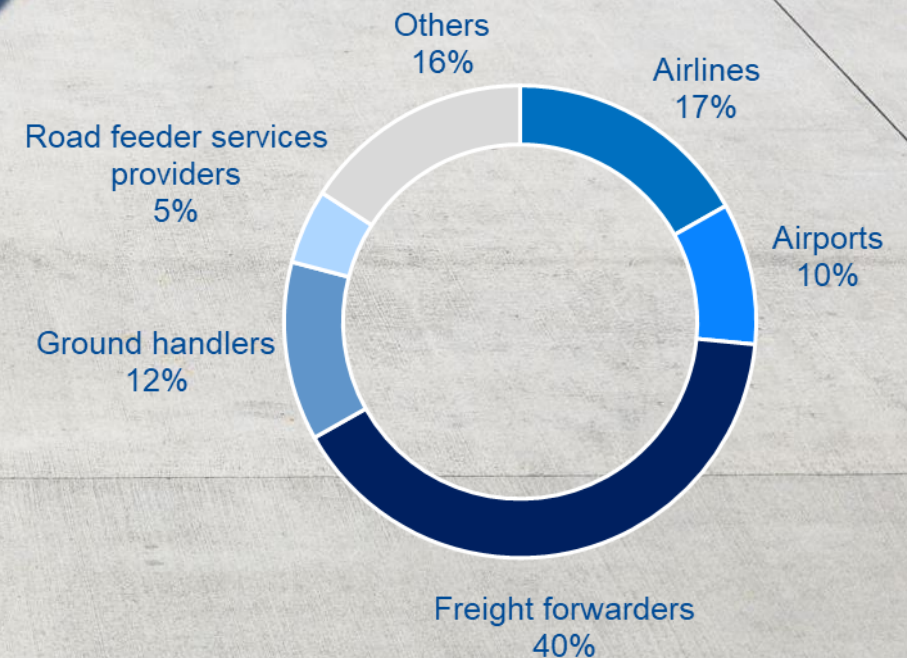
RELIABILITY



TRANSPARENCY

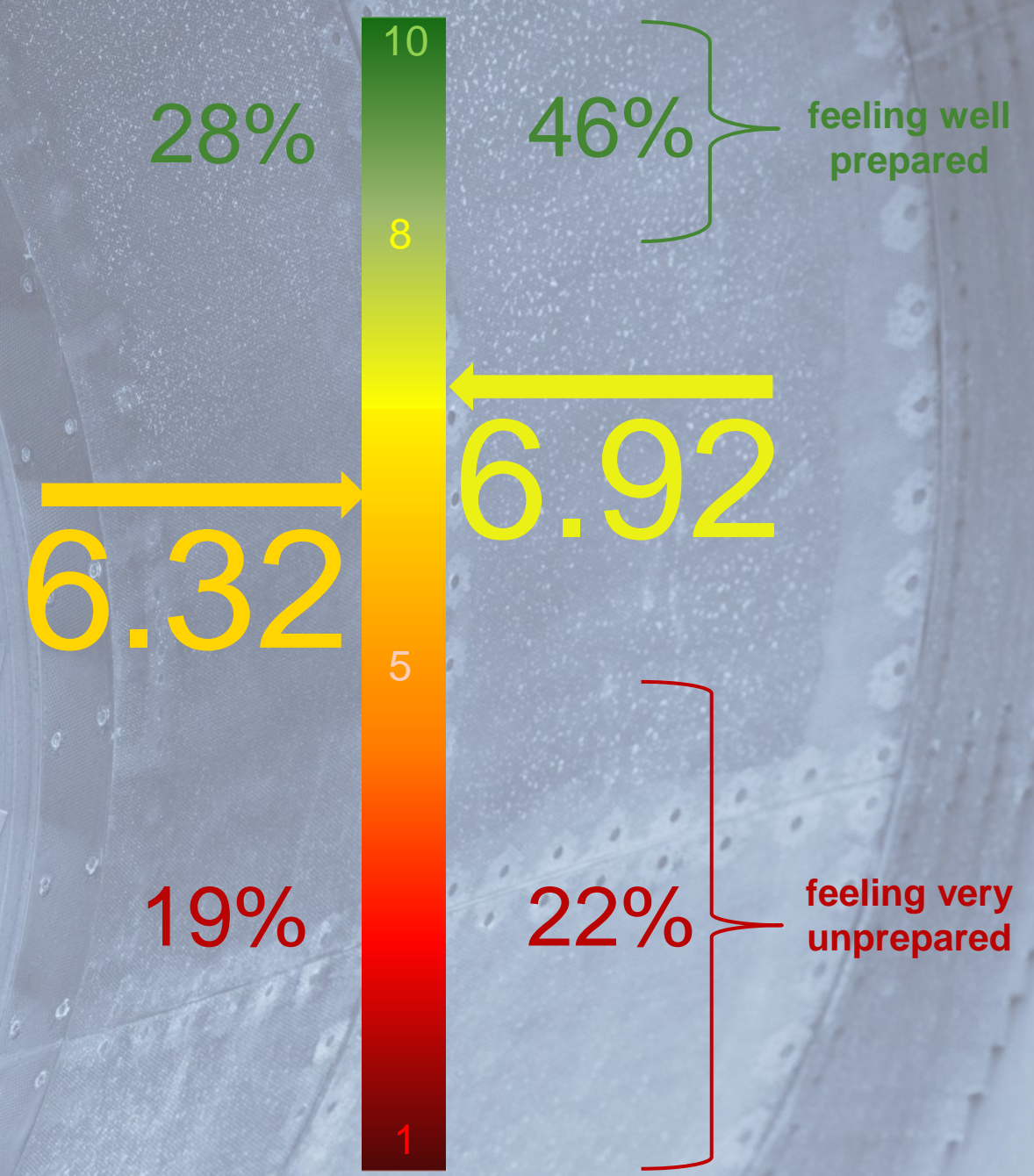
How ready is the air cargo industry?

TIACA and Pharma.Aero ran a second airfreight readiness survey in November 2020 to follow-up and monitor progress



Sunrays airfreight readiness survey, November 2020
(196 answers, analyzed by Change Horizon)





Source: TIACA and Pharma.Aero - Sunrays airfreight readiness surveys, September (left side) and November (right side)



While the first COVID-19 vaccines are ready to be distributed and administered to the first patients,

TIACA and Pharma.Aero applaud the current readiness progress and exceptional industry collaboration happening in the air cargo industry!



Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)



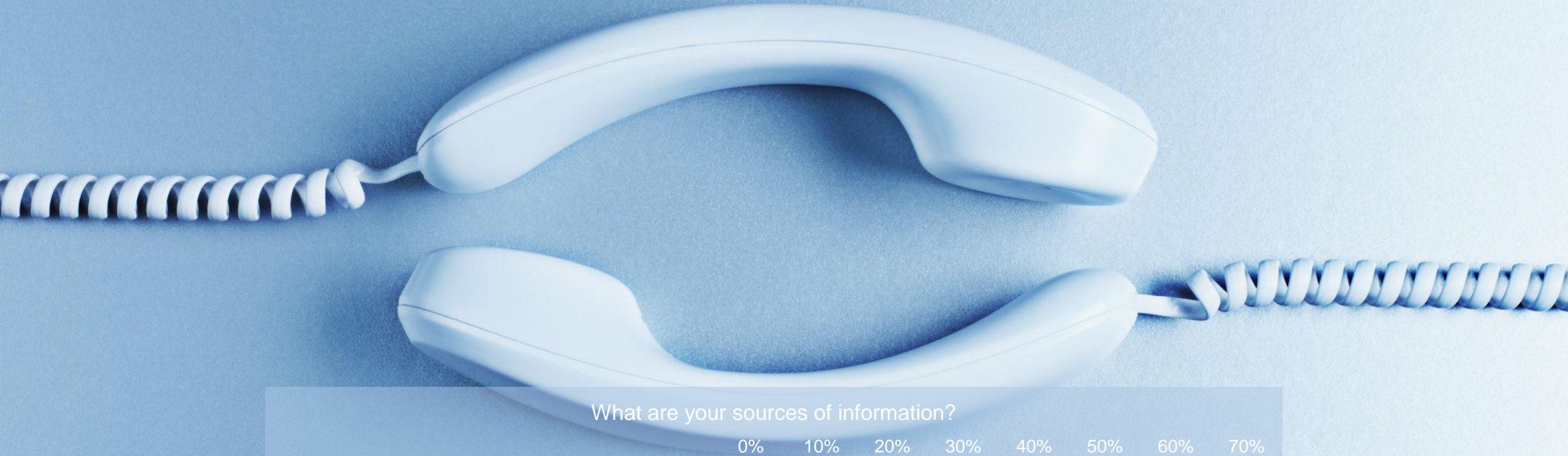
8.65

This is the readiness sentiment of the air cargo companies having the combination of dedicated team in place + collaboration with vaccines manufacturers + collaboration with their supply chain partners.

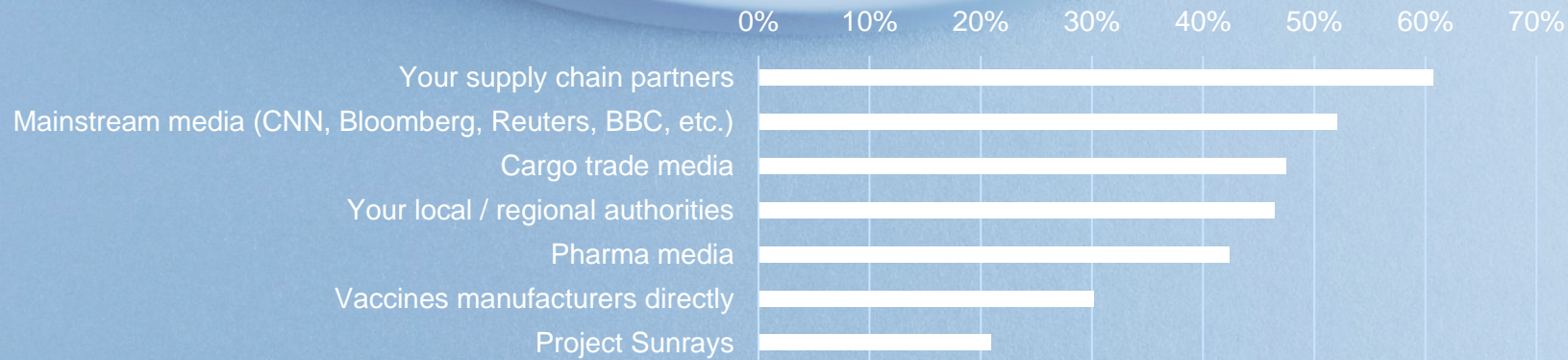


Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)

91% of air cargo industry feel more **informed** now



What are your sources of information?



Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)



79% of air
cargo industry
feel more
prepared now



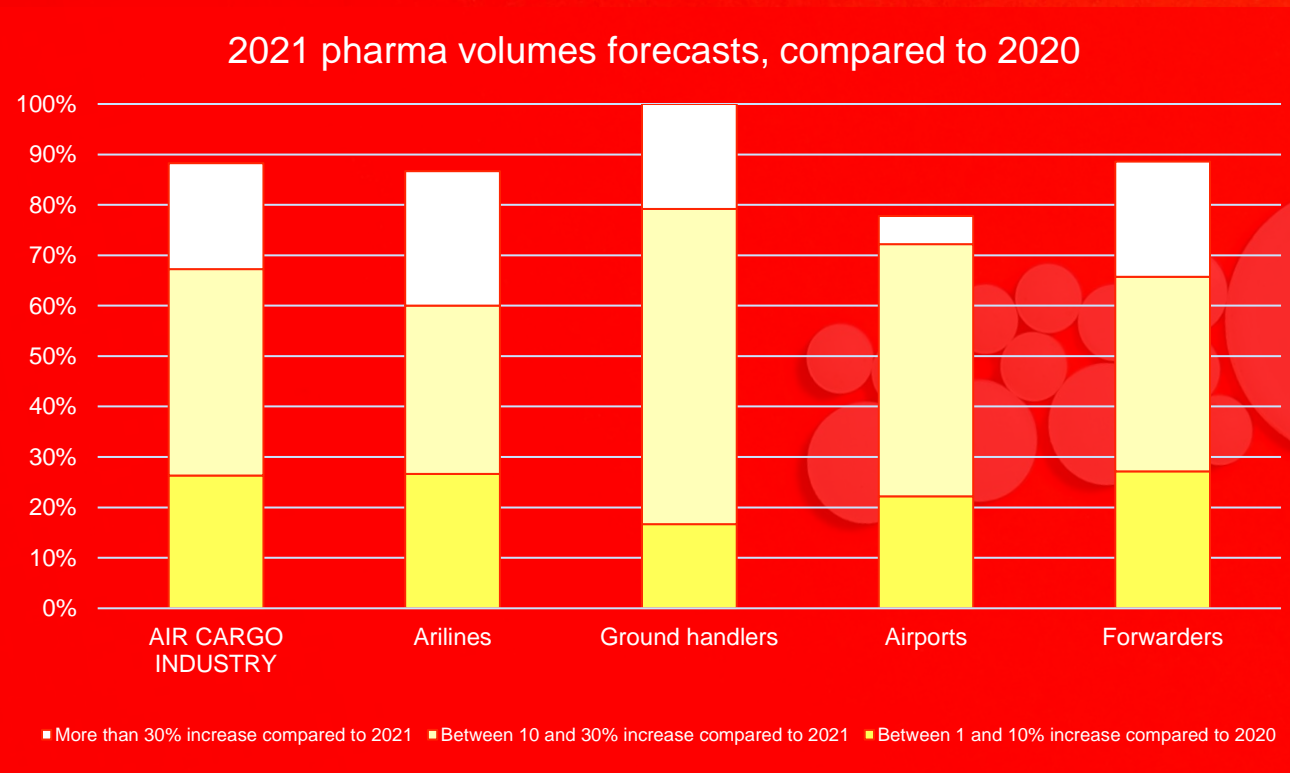
There is more collaboration now

in the air cargo industry to address this unprecedented logistical mission,
according to 53% of the respondents



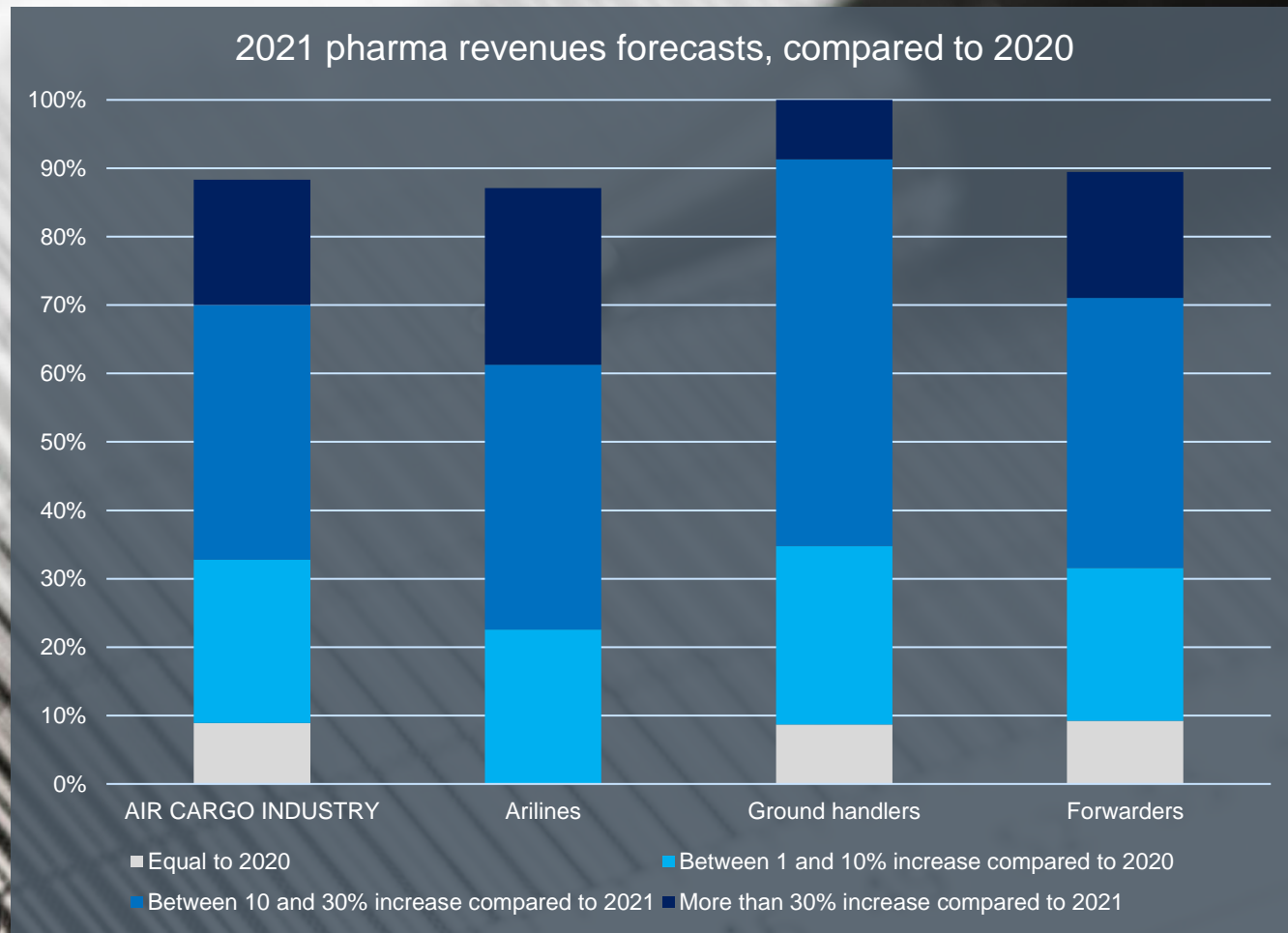
Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)

88% of the airfreight professionals expect an increase in their pharma volumes in 2021 compared to 2020



Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)






79% of the airfreight professionals forecast an
increase in their pharma revenues in 2021
compared to 2020



Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)



64% of air cargo stakeholders project an increase in their **investments** to sustain their pharma business next year and to handle COVID-19 vaccines:

- 33% plan to recruit more people
- 37% plan to expand or upgrade their cargo facilities
- 40% plan to secure more cool chain ground service equipment, ULDs, containers and dry-ice



Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, November 2020 (196 answers, analyzed by Change Horizon)



The air cargo professionals identified the main **risks**, real or perceived, linked to the transport of COVID-19 vaccines in unprecedented quantity, limited timeframe and in the current economic downturn



TEMPERATURE
EXCURSIONS



LACK OF
VISIBILITY



LACK OF
ADEQUATE
INFRASTRUCTURE



CAPACITY
SHORTAGE



UNEXPECTED
DELAYS



END-TO-END
CONNECTIVITY



SECURITY



COSTS

Anticipation is essential, even with a lack of information

Anticipating and managing risks are part of the DNA of air cargo professionals



- Training more staff
- Setting up a 24/7 control tower to handle irregularities



- Adding cargo capacity
- Facilitating approval of additional charter flights & planning special slots
- Educating customers on load optimizations & container utilization to maximize space on aircraft



- Mapping current capabilities at origin, transit and destination points
- Expanding cargo facilities to include new cold storage infrastructure
- Securing availability of containers, dry-ice, space



- Using or encouraging use of monitoring devices

49% will (+42% may)
introduce additional and/or
premium services



- Dedicated teams
- Special care service
- 24/7 availability
- Airside thermal protection
- Guaranteed insurance on vaccine transported



- Express booking
- Fast break down
- Clearance at any time



- Tailor-made product with special handling and monitoring of the temperature control, along with timely information to the shipper



36% will (+41% may) invest in additional physical and/or digital infrastructure



- More staff
- Additional investment in training and certification
- Additional cold boxes and active containers
- Additional mobile temperature readers
- Additional data loggers
- Additional sockets



- Ad hoc air charter
- Extra cool rooms
- More space at storage facilities

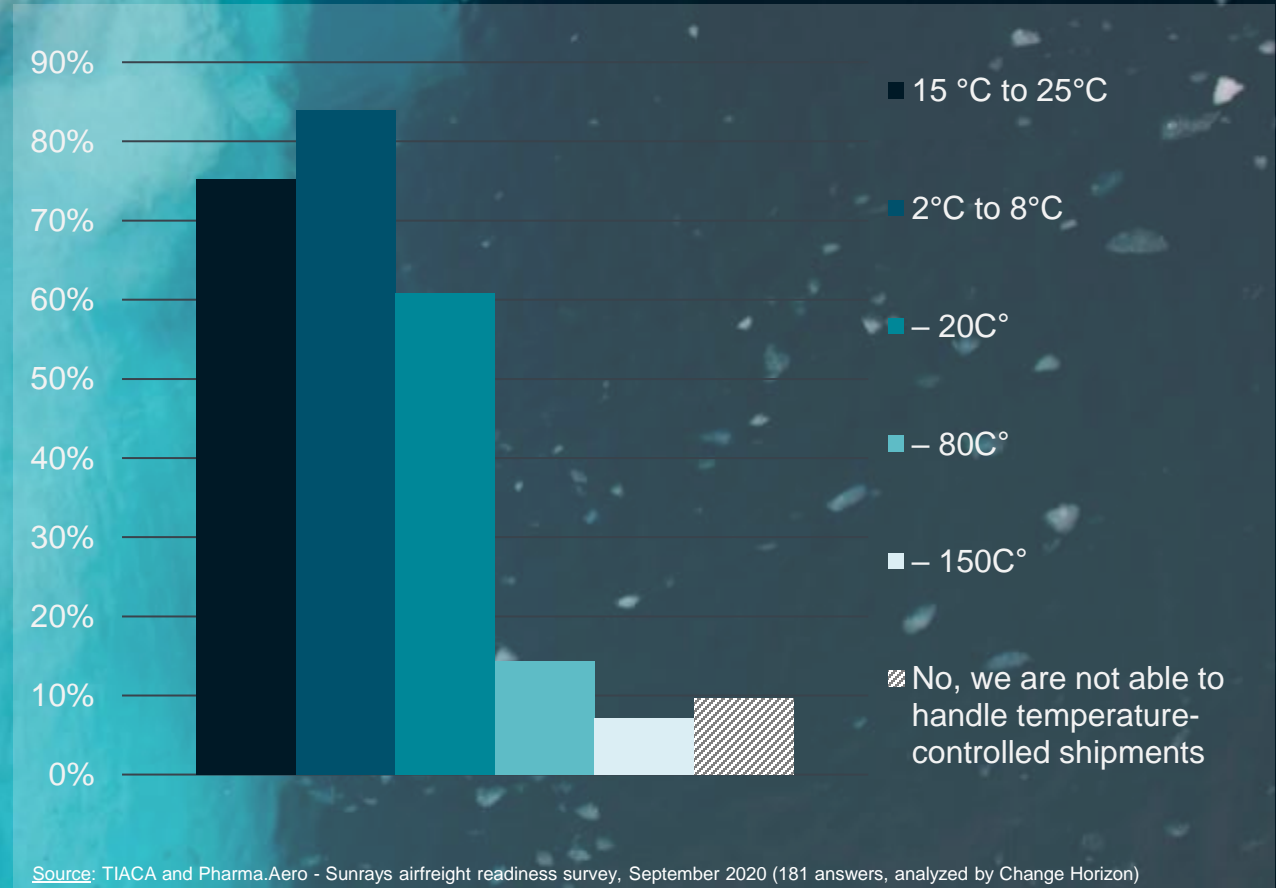


- Additional software investment
- New digital cargo community platforms

The airfreight logistics industry is already well equipped to handle temperature-controlled shipments

For vaccines requiring deep-frozen temperatures, the success requires to combine:

- The adequate infrastructure
- The right packaging
- SOPs and trained staff in place
- Dry-ice stocks and refill stations



54% of airfreight providers have cool chain ground equipment and ULDs already in place

- Pallet shippers
- Cool rooms
- Active containers
- Thermal blankets & thermo dollies
- Reefer trucks & last mile delivery vans



Yes, we already have them in place

Not really, we are in the midst of securing them

No, we do not plan to secure them

0% 10% 20% 30% 40% 50% 60%

Source: TIACA and Pharma.Aero - Sunrays airfreight readiness survey, September 2020 (181 answers, analyzed by Change Horizon)



TIACA and Pharma.Aero calls for



Industry collaboration



Visibility and transparency



Capabilities scale-up



Physical and cyber security



Support from regulators



Support from NGOs