Ground Operational Readiness - Post COVID-19 (2020)

Executive Summary

Members of the Ground Handling Operations Safety Team (GHOST) have worked together to create guidance materials that will assist all stakeholders prepare for a return to safe operations, through the adoption of a standardised approach:

- A risk assessment template has been developed for use by community stakeholders, to ensure that risks associated with the ramp-up of operations have been identified, along with suggested control measures that could be taken to reduce identified risks to within acceptable levels. It is the responsibility of stakeholders using the risk assessment to review the identified risks to determine risk exposure and control measures appropriate for their respective organisations.
- Ground operational readiness guidance (this document) has also been developed to support the risk assessment and provide further detail to stakeholders on key risks identified by its industry subject matter experts:

  1. **Management of Expiring Training.**
  2. **GSE/Vehicle Care and Maintenance.**
  3. **Staff Wellbeing.**
  4. **Wildlife Management.**
  5. **Management of Station Restarts.**

Both the risk assessment and guidance material are working documents that are subject to change due to the evolving nature of the COVID-19 pandemic. They will be amended accordingly.

Objective

The EASA requirements (Air Operations and Aerodromes) places safety management responsibilities on the certificate holders, which in turn includes all contracted activities. Members of GHOST, which includes representatives from the airlines, various ground handling service providers, airport authorities and aviation regulatory authorities, felt that further specific and pragmatic examples would provide stakeholders with valuable information with which to populate risk assessments and assist their own recovery plans.

GHOST intends to remain aligned with the outputs from other industry groups and will simply provide more detailed analysis of the topics that are affecting our community. Where possible, links to other data sources have been provided within the risk assessment.

Scope

Operations are likely to restart gradually, in due course, as travel restrictions are lifted and customer demand/confidence becomes more certain. In a best-case business scenario, demand for flights could quickly increase but at short notice.

Whilst many operators have significantly reduced flying programmes for Summer 2020, Summer 2021 demand is unknown and could feasibly be at the levels expected prior to COVID-19, thus creating a substantial increase in operational activity between this and next year. Winter 2020/21 is within that time period and could also experience an unusually increased flying programme.

Our aviation community strives for standardisation. It is hoped that by producing this guidance, we will all be working to a similar and standardised level of expectation, during what will undoubtedly be a challenging time.

Whilst the associated risk assessment contains numerous topics and activities, the subject matter experts have initially deemed the aforementioned five topics to require enhanced description, within this document:

1. Management of Expiring Training

Training, either face to face or using technology, faces many challenges with "self-isolation" and/or "social distancing" being required by many governments, under the advice of national health authorities. In addition, many employees will be "working from home" or on "furlough" (either paid or unpaid according to government intervention) and it may not be possible with labour agreements to require unpaid furloughed employees to attend training.

Where it is both possible and allowed, it is expected that planned training (recurrent and/or refresher), should take place. However, where it is not possible to bring people together for any of the above reasons, some planned training for employees will not be possible.

Not every employee's recurrent training will be overdue in the next 90 days, so organisations should prepare a report of how many and in what topics, to show indicate the degree of risk being tolerated. This will assist in the preparation of the "back to normal" scenario, as there will be a backlog of work needing a resource to complete.

Aviation Security and Dangerous Goods training are both embedded in national law and can only be granted an alleviation by the competent national authority. If this is the case, organisations should

ensure a record of this alleviation is implemented and retained for future reference. As there will be significant disruption to all training activities, it is imperative that training departments fully document all alleviations and extensions, in addition to accurately recording completed training.

Whist not strictly "training", some organisations require personnel who conduct safety critical services, such as load control, to stay current by completing their task on a frequent basis. Whilst it is appreciated that there is no substitute for the live operation, organisations should explore the possibility of finding alternative ways to maintain this familiarity. Solutions could include the completion of manual documentation or the use of the system remotely.

For other activities, organisations could carefully consider allowing personnel's training to expire, with reference to the following rationale. A person needing 36 month recurrent safety training does not become unsafe on the day after 36 months, so it is suggested that an initial 90 day alleviation to safety topics be considered.

For employees who have been furloughed or not present at work due to lay off this needs to be managed in order to have a safe and competent service provided. IATA already provide industry guidance in AHM1110:

Period of Absence	Action
Up to 3 months	Brief the employee on any procedural, organizational, or equipment/infrastructure updates/changes that might have occurred during their absence. The briefing shall be documented and filed accordingly.
Between 3 and 12 months	Brief the employee on any procedural, organizational, or equipment/infrastructure updates/changes that might have occurred during their absence. The briefing shall be documented and filed accordingly. Additionally, deliver On Job Training to ensure competence has been maintained. Should any gaps in competence be identified, a period of requalification training shall be initiated.
Between 12 and 24 months	Brief the employee on any procedural, organizational, or equipment/infrastructure updates/changes that might have occurred during their absence. The briefing shall be documented and filed accordingly. Additionally, deliver requalification training, including a documented, formal assessment of competence, as per initial training, in order to confirm the employee remains competent to perform that role.
More than 24 months	Initial training program(s) to be delivered.

Considerations should be given to other training requirements, some of which have the potential for subsequent legal action. Three such examples are; Regulation (EC) No 1107/2006 relating to the rights of disabled persons and persons with reduced mobility when travelling by air https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006R1107, CFR 49 Part 382 - controlled substances and alcohol use and testing https://www.fmcsa.dot.gov/regulations/title49/part/382 and General Data Protection Regulation https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en. It is the responsibility of the organisation to set the recurrent timescale for GDPR training and it is expected to be provided.

For an ISAGO accredited organisation, it will mean that the location is no longer in compliance but given the exceptional circumstances we are currently experiencing, audits are unlikely to be

undertaken. However, it is felt that if the rationale included in this guidance documentation, is formally recorded, it should dissuade auditors from raising unreasonable related findings, in the first weeks of recovery.

The only item that is non-negotiable, is allowing an untrained person to perform a task which they hold no record of training for.

Consideration should be given to recalling trainers from furlough in sufficient time to assess their own competencies and refresh/recertify the training team if required, prior to them assessing anyone else. Trainers can then be utilised to assess competencies of the wider team prior to/during the recommencement of operations.

To ensure sufficient trainer availability for the station's needs, each organisation should review trainer resource vs. manpower.

In time, GHOST members have suggested that the group may produce further materials, providing guidance to assist organisations in determining what training or competency assessments are required for individuals who have been out of the business for varying periods of time.

2. GSE/Vehicle Care and Maintenance

If not addressed, long periods of inactivity for ground service equipment and vehicles has the potential to cause significant problems. It is far more logical and efficient to keep both in an operational condition, rather than to allow them to degrade to a condition that will require full technical intervention. Especially as maintenance departments will be inundated with work, as our industry recovers.

Initially, organisations should refer to the equipment/vehicles manufacturer's materials to identify any related requirements.

CAP 790 Requirement for an Airside Driving Permit (ADP) Scheme gives guidance and recommends standards to be set by aerodrome operators and airside contractors and operators for drivers and vehicles operating airside. It includes references on driver qualification and testing and on vehicle standards: "The aerodrome operator should establish and promulgate its own local minimum standards for vehicles operating in airside areas. These standards should ensure that each vehicle is fit for its intended purpose and that its condition is such that it will not endanger vehicle users, other vehicles, pedestrians, aircraft or property".

Airport authorities will need to ensure that passenger boarding bridges are and remain maintained, according to the manufacturer's (and where applicable, aerodrome) standards. It may be prudent to have them fully tested daily, as they will be expected to support any existing flying programmes - as with any GSE or vehicles, an underlying defect could result in aircraft damage.

As a real-life example, consider if your car was left for a month without being driven, it may have a flat battery, the brakes may be seized on or systems may not work normally.

IATA Guidance

IATA have published ['Quick Reference for Ground Handling during COVID-19'](#), which incorporates procedures that provide a quick reference and general guide for formally taking GSE Out of Operational Use (OOU), how to manage it while OOU and steps to return it to service.

Where Ground Support Equipment is needed to be taken out of operational use for a period of time, it should be done following a plan, taking into account basic steps to prevent serviceability issues and unplanned costs, when it is returned back to service.

The following steps should be considered.

Preparation

Preserving an active GSE fleet should follow a documented plan that should address procedures to de-activate equipment, procedures to be adopted during storage and procedures to ensure safe return to operation.

Adequate preparation will ensure active GSE are preserved in a safe and fully functional condition, to enable quick return to operation and safe to use, with least impact on cost. Consideration should be given to the intended period and recommendation references should be taken from the following sources:

- Equipment manufacturers' (OEM) guidelines.
- Local regulations and procedures which are more prescriptive than manufacturer's guidance.
- Recommended best practices and/or guidelines offered by IATA.

Planning

A return to service plan should be developed in parallel to a storage plan as normally storage actions have a corresponding required action for an equipment to be returned to service.

Planning should be proportionate to fleet size and be reasonably achievable, taking into consideration local conditions for storage, staffing levels and capacities to carry out the required tasks.

GSE storage plans may involve:

- Complete deactivation.
- A periodic planned activity of the GSE is operated.

- Planned rotation of units to distribute the utilization of the fleet.
- A combination of strategies.

Actions during Storage

The storage plan should be followed and recording of all actions is important.

General Recommendations:

- If rotation of fleet is being considered, this should be done in a planned manner, to distribution of utilization.
- If swapping of GSE is being carried out to support operational continuation, consideration should be given to ensure that complete unserviceability of fleet does not happen.
- If general start-up of motorised GSE is being considered, full operational test should be applied, including rotation of tyres, use of brakes and hydraulic systems and others, to ensure circulation of fluids and preservation of seals.
- Cannibalisation of spares between GSE should not be undertaken, as this leads to uncontrolled repairing.
- Where possible, maintenance programmes and schedule should be continued and or revised and the opportunity to complete overdue tasks should be considered.
- Stored units should be subject to periodic checks for state of readiness.
- Conditions of storage should drive checks for local fauna infestations, water infiltration, etc.
- Stock management of fluids and spares should be carried out to ensure that necessary quantities are available for return to service phase and not cause delays in GSE availability.
- Record of all activity carried out for each unit should be maintained during the storage period, including periodic operational checks as this will enable a documented process of accessing reliability of equipment when return to service is made.

Return to service

The return of equipment to service will depend on factors such as:

- How and what preparation was carried out for placement of equipment into storage.
- If equipment was operated or rotated and/or checked during the storage period.
- If scheduled maintenance was carried out during this period.
- Quality of records maintained during the storage period.
- Stock of fluids and spares when "return to service" is initiated.

Following recommendations should be considered before the GSE is returned to operational service:

- Safety functional checklist should be put together prior to commencing the "return to service" program.

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- Where available, manufacturer pre-operations checklist should be used to complement and/or enhance the safety functional checklists.
- Checks should include presence of wildlife, status of intakes and exhausts, conditions of tires, wiring, hoses, fuel lines, evidence of leakage of fluids or any obvious signs that would indicate or suggest that equipment is not ready for use.
- Follow approved re-instatement procedures where long-term storage was carried out.
- Normal record keeping and maintenance management program should be re-instated after as units return to operation.

3. Staff Wellbeing

ICAO's Manual on Ground Handling refers to the commonly used concept of the "Dirty Dozen". The Dirty Dozen refers to twelve of the most common human error preconditions or conditions that can act as precursors to accidents or incidents. During these this challenging period and the subsequent recovery, at least four of the dozen are particularly relevant:

Lack of resources

If all the correct or appropriate equipment is not available to complete a turnaround then there may be pressure on ground staff to complete the task using inappropriate equipment. The ground handling resources include personnel, time, data, equipment, skill, experience, knowledge, etc. A lack of any of these resources can interfere with a GHSP's ability to complete a task.

When the proper resources are available, there is a greater chance that staff will complete a task more effectively, correctly and efficiently. Therefore, forward planning to make available and positioned correctly in advance of the aircraft arrival is essential.

Stress

There are many types of stress. Typically, in the aviation environment there are two distinct types - acute and chronic. Acute stress arises from real-time demands placed on a person's senses, such as dealing with an emergency or working under time pressure with inadequate resources. Chronic stress is accumulated and results from long-term demands placed on the physiology by life's demands. When people suffer stress from these persistent and long-term life events, it can mean the threshold of reaction to demands and pressure at work can be lowered.

Managers and supervisors should be aware of signs of stress, which may include changes in personality and moods, errors of judgment, lack of concentration and poor memory. Individuals may notice difficulty in sleeping and an increase in fatigue, as well as digestive problems. Longer-term signs of stress include susceptibility to infections, increased use of stimulants and self-medication, absence from work, illness and depression. GHSPs should consider employee assistance (or well-being) policies that include stress reduction programmes.

Pressure

Pressure is to be expected when working in a ground handling environment. However, when the pressure to meet a deadline interferes with the ability to complete tasks safely and correctly, it has become too great to handle. In ground handling, staff should never knowingly reduce the quality of their work to meet time bound targets. Ground handling staff will come under direct, or indirect, pressure from their own company, clients, colleagues and themselves. Staff will often take on more work than they can handle. Assertiveness skills will allow a worker to say "no", "stop" or "slow down", and communicate these concerns with colleagues, customers and the company. These skills are essential and when deadlines are critical, then extra resources and help should always be obtained to ensure the task is completed to the required level of quality.

Fatigue

Fatigue is a natural physiological reaction to prolonged physical and/or mental stress. The ground handling operations are at many airports 24 hour operations with shift patterns that involve unsocial hours. Fatigue will occur following long periods of work and periods of hard work. As personnel become more fatigued their ability to concentrate, remember and make decisions will reduce, they can become distracted and lose situational awareness. Fatigue will also affect a person's mood, often making them more withdrawn and sometimes more irrational and angry.

When fatigue becomes a chronic condition it may require medical attention. Supervisory personnel should be aware of their team members and watch for signs of fatigue in others and themselves. It is human nature to underestimate the level of fatigue and overestimate the ability of an individual to cope with it.

Work of a critical and complex nature should not be programmed during the low point on the body's circadian rhythm (usually from 03:00 to 05:00 hours). When fatigued, good practice is to cross-check work or actions undertaken by the team. This time period does coincide with many airports preparing for the first wave of morning departures and early arrivals, therefore GHSPs should pay particular attention to the capabilities of their teams during this time.

4. Wildlife Hazard Management (WHM)

It is likely that WHM will not necessarily be at the forefront of an airport operators mind during this COVID-19 crisis. Although some airports may increase the focus on habitat management as they see this 'downtime' as an opportunity, it would be realistic to say that others will reduce their focus, as resources decline. Any deviation will result in changes in the rate of exposure to wildlife strike risk, and it is vitally important that airports and airlines assess these potential changes.

A reduction in focus of any wildlife hazard management program may impact the surrounding habitat, especially now, during the breeding season. There is an increased risk of the airfield

becoming more attractive to birds and wildlife. The low volume (or ceasing) of flights landing and departing may further increase attractiveness of bird and wildlife to airfields.

Evidence from a number of UK airport operators indicates increased bird observations and also a persistence in birds now habituation quiet-er airfield, which have meant airport operations personnel have had to double typical bird harassment and dispersal techniques.

With many airports having fewer flights and an associated reduction in duty personnel, it is important that WHMP's are considered and enacted prior activated ahead of to a return to operations. Indeed, empirical data suggests an increased probability of birdstrikes following periods of shut-down, posing a significant risk to fight safety.

Every airport will have their own view on this subject and WHMP's, so in order to gain/capture an understanding of what level of increased control measures might be required during this period of reduced flight activity, it is suggested that the following questions should form the basis of a questionnaire to airport (or a representative selection of airports):

1	What are your identified Wildlife Hazard Management risks associated with the changes imposed by the COVID-19 situation?
2	What changes to your Wildlife Management Plan have been made as a result of the COVID-19 situation?
3	Please provide details of any reduction in the delivery of active wildlife control that have resulted from the COVID-19 situation.
4	What changes have been made to your airside habitat management plan as a result of the COVID-19 situation?
5	Please provide details of your plan to ensure wildlife risks are managed when the number of flights increases/operations recommence. (Including lead time - how far in advance such a plan is activated)

Airports should be able to demonstrate the adaptability of their Wildlife Hazard Management Plans to the changing situation imposed by the COVID-19 situation and detail risks associated with changes resultant from the COVID-19 situation to:

1. Wildlife behaviour.
2. Wildlife hazard management plans.
3. Airside habitat management plans.

Airports should also be able to demonstrate that a risk assessment process has informed action taken to reduce identified risks. The risk assessment should have been updated in response to the challenges imposed by COVID-19. Airports should also be able to detail how they will mitigate such changes to maintain compliance with (EU) No 139/2014.

5. Management of Station Restarts

One of the most significant challenges will be the management of station restarts. The industry is currently unsure of the how the phased return to operations will develop. As limited resources (both finance and personnel) and certain travel restrictions may still exist, the ability for full pre-operational assessments may not be an option. Whilst onsite visits still remain the chosen method, alternative strategies should be considered.

One of which is an aide-memoire which can be used by all stakeholders, including a number of self-declarations, covering some of the topics included above:

1	Have risks and associated with a ramp-up of operations and mitigating actions been documented in a risk assessment? Please provide supporting evidence.
2	Has an operational re-start plan been developed that addresses identified risks? Please provide supporting evidence.
3	When are furloughed staff planned to return to work prior to restart of operations?
4	Do you have sufficient staff available to handle the proposed schedule by airlines?
5	Has a plan been developed to ensure competency of returning staff? Please provide supporting evidence.
6	Has a training plan been developed for staff that need to complete mandatory training? Please provide supporting evidence.
7	Has GSE been maintained during the period of reduced operations?
8	Has a plan been developed to ensure GSE is serviceable prior to the ramp-up of operations? (refer to IATA guidance) Please provide supporting evidence.
9	Do you have sufficient GSE to handle the proposed schedule by airlines?
10	How much notice is required prior to the ramp-up to ensure the safe commencement of operations?

The results of the above should determine the ground handling service provider's readiness state:

GHSP Self-declaration - Please delete as appropriate	
Red	Major resourcing/equipment issues. No risk assessment completed or plans in place for ramp up of operations. Will not be ready for ramp-up of operations
Amber	Minor resourcing/equipment issues. Risk assessment complete and mitigations identified with action plan to resolve prior to ramp-up of operations. Likely to be ready for re-start of operations.
Green	No resourcing/equipment issues. Risk assessment complete and mitigating actions completed. Will be fully ready for safe restart of operations.

Safety Oversight (Internal & External)

In crisis events such as this, a management system is a key tool. An important part of that management system is the oversight of operations to ensure compliance with regulations, documented best practices, safety procedures within your own manuals, and in extraordinary situations like this, compliance with your own risk assessed procedures to get ground handling activities back up and running.

National Aviation Authorities (NAAs) will also re-start their oversight programmes, albeit while very aware of the circumstances that prevail and the work GHSPs are conducting to restart operations.

Your National Aviation Authorities are also here to help in any way they can, so please contact them if you have any queries or concerns.

Other Considerations

Our industry is arguably facing the most significant challenge in the history of aviation. The are many uncertainties, which despite everyone's best efforts, will remain for some time. Competition to secure business could be greater than ever and whilst finances are of the upmost importance, we must not lose sight of the importance of the safety critical activities we conduct, as a community.

All industry committees and groups recognise the need to work together to get the aviation back on its feet again and sustain safe operating standards. GHOST echoes these sentiments and urges members to do so and consider a reasonable approach to previously challenging operating terms.

As suggested in the associated risk assessment, consideration should be given to taking an empathetic approach to handling agreements, turnaround times and performance/service level penalties as our industry recovers.

For any related comments, feedback or information please contact GHOST@caa.co.uk