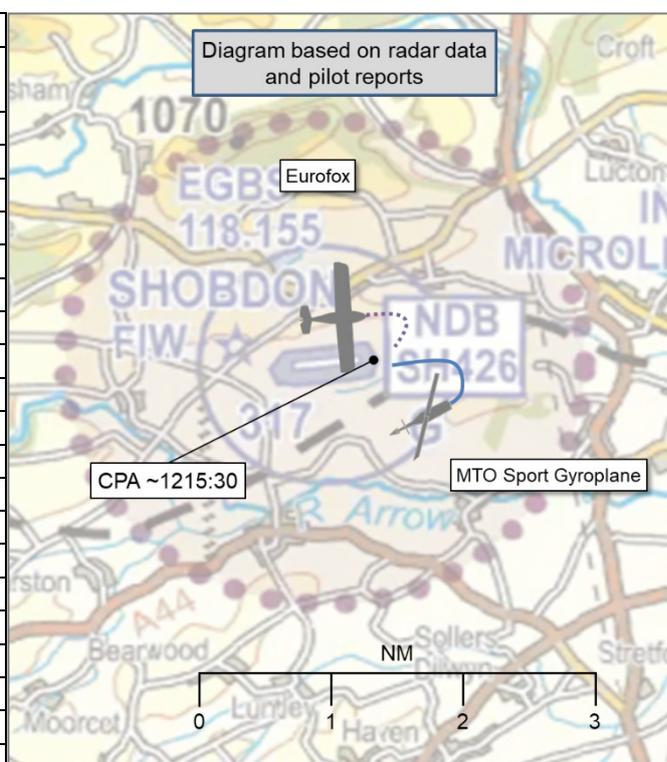


AIRPROX REPORT No 2021190

Date: 20 Sep 2021 Time: 1215Z Position: 5214N 00252W Location: Shobdon

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|-------------------|---------------------|----------------|
| Aircraft | MTO Sport Gyroplane | Eurofox |
| Operator | Civ Helo | Civ FW |
| Airspace | Shobdon ATZ | Shobdon ATZ |
| Class | G | G |
| Rules | VFR | VFR |
| Service | AFIS | AFIS |
| Provider | Shobdon | Shobdon |
| Altitude/FL | NK | NK |
| Transponder | A, C, S | None |
| Reported | | |
| Colours | Red | Yellow |
| Lighting | Strobes, Nav | LED |
| Conditions | VMC | VMC |
| Visibility | >10km | >10km |
| Altitude/FL | 150ft | 200-300ft |
| Altimeter | QFE (1015hPa) | QFE |
| Heading | 260° | 260° |
| Speed | 70kt | 50kt |
| ACAS/TAS | Not fitted | FLARM |
| Alert | N/A | None |
| Separation at CPA | | |
| Reported | 30ft V/30m H | 'below'/100m H |
| Recorded | NK | |



THE MTO SPORT GYROPLANE PILOT reports that the active circuit RW26L, was busy with rotary, fixed wing and gliding activity and glider tug (tug and gliders on RW26R circuit). The R/T was also busy with start-up/ taxiing instructions. The pilot made a standard overhead RW26L join and radio calls, descended dead-side, and called in downwind to report final. A helicopter was joining final from a left-base join which they saw when on final. They turned final for RW26 northside grass, but because of busy R/T they could not get a radio call in for final. No other traffic was in front on either RW26 main or grass. When at approximately 100ft, because they did not have landing clearance and they were unsure of where the tug was (which they knew had previously gone around), they elected to go around and made the radio call. They were warned by the controller that the tug was also going around and it was immediately on their left and slightly higher. They conducted a shallow climb to keep visual with the tug which then continued on RW26R circuit and they continued onto RW26L.

The pilot assessed the risk of collision as 'Medium'.

THE EUROFOX PILOT reports they had offered to tow gliders for the Herefordshire Gliding Club at Shobdon, as it was an excellent day for soaring, using the club's Eurofox tug, which they had flown on numerous occasions. It was a reasonably busy day for aircraft/helicopter movements at the airfield but, as is normal, gliders and the tug were operating off grass RW26 with a close-in circuit to the north of the airfield, fitting in with the other traffic and communicating with the FISO in the tower. The weather was benign with no wind or visibility issues. They were descending from the north after towing a glider, the fifth of the day, intending to join right base for north side grass RW26. They were aware that an R22 helicopter was in the area but were not visual. At about 500ft they called joining and the FISO asked whether they were visual with the R22. They became visual with the R22 very close to the airfield and it appeared to be making an approach to the grass runway. They were reasonably high at this point and, being very conscious that they were trailing a tow rope of some 200ft in length, called going around

and climbed to about 500/600ft. They then turned right and joined the glider/tug circuit approximately half way along the downwind leg. They could not remember whether they called downwind or not but when approaching the point to turn on to the right base-leg, they were stung by a wasp on their right forearm. This was of course a little distracting, particularly because they couldn't brush it off their arm at first and when they did, it left its sting behind. It was quite painful and their arm began to throb. As they turned onto final approach, they became aware of an autogyro ahead of them, slightly below and to their right, but not so close that they considered there was any immediate risk of a collision, as their speeds were quite similar and they were both flying the runway track. They discovered later that the other pilot was conducting a go-around. It is possible that they missed a call from the FISO relating to the autogyro, because of being distracted, but considered the best course of action was to move over to be above the main runway, whilst applying full power to climb away, again being very aware of the tow rope behind the tug. They knew the tug could well outclimb the autogyro, and they climbed rapidly to 1000ft above the runway to clear any possible conflict, re-joined the glider circuit and continued to land normally. They were aware that there were no gliders in the circuit at this time. They did not consider there to have been a risk of collision because the gyroplane was ahead of them, to the right and below and they climbed ahead on runway heading to remain clear of it.

A while later, they met the autogyro pilot as they came down from the tower after speaking to the FISO. The other pilot reported that the FISO thought they should file an Airprox, which they declined to do, as they both thought there had not been a risk of collision. The Eurofox pilot then went to speak to the FISO, telling them of the event as described above and telling them that they didn't think there had been any risk of a collision. The FISO then said that the aircraft had "*lost separation*". They were a little surprised at this as it was a FISO, not an Air Traffic Controller and without radar information, and they couldn't see how the FISO could determine this as their perspective from the tower meant that because the Eurofox was behind the autogyro in the FISO's line of sight, it would have been very difficult for the FISO to visually judge the distance between the two aircraft.

The pilot assessed the risk of collision as 'None'.

THE SHOBDON FISO reports the [Eurofox C/S] was operating on the airfield as the glider tug, using RW26 grass with the right-hand glider circuit. Other aircraft were using the powered left-hand circuit for RW26, including a gyroplane. At approximately 1213 [Eurofox C/S] reported downwind, just after a visiting R22 helicopter had reported final for RW26 grass and had been given landing information by the AFISO. They gave [Eurofox C/S] this information and they appeared to extend their downwind leg as a result, but then turned onto base-leg and then final while the R22 was still on short final. They alerted the [Eurofox pilot] to this, and they went around. The [gyroplane C/S] reported downwind and was asked to report final. At around 1215 [Eurofox C/S] again reported downwind, and was shortly thereafter seen to be on a close-in base-leg and turning final at the same time as [gyroplane C/S] was observed to be on final. The gyroplane pilot had not yet been heard to make a final call. The two aircraft appeared to be close together on the final approach at approximately 150-200ft and so the FISO warned [Eurofox C/S] of the gyroplane. Both aircraft then went around. In talking to both pilots afterwards they stated that neither had seen the other until they went around.

Factual Background

The weather at Shawbury was recorded as follows:

METAR EGOS 201150Z 34007KT 9999 FEW032 18/10 Q1025 NOSIG RMK BLU BLU=

Analysis and Investigation

CAA ATSI

The MTO Sport Gyroplane (GYRO) had been operating VFR to the south-east of Shobdon airfield, whilst the Eurofox was operating as a glider tug.

At (approximately) 1206:14 the pilot of the GYRO called the Shobdon AFISO advising that they were 5NM to the south east at 3000ft and ready for rejoin. The AFISO requested they report overhead for a left-hand circuit to RW26 which was acknowledged by the pilot. 45sec later the pilot of the Eurofox called ready for departure and subsequently departed from the grass runway to the north of RW26. The AFISO then spoke to a transit aircraft which was requesting a Basic Service and intending to fly through the airfield overhead at 3600ft. The AFISO advised them about the gliding activity and a “moderately busy airfield”.

At 1207:24 the pilot of an R22 reported at 5NM and a left-base join for RW26 was agreed, with the pilot requested to report left-base.

At 1211:10 the pilot of the GYRO reported in the overhead at 2000ft and advised that they were descending deadside. The AFISO requested a downwind call which was acknowledged by the pilot.

At 1212:48 the pilot of the R22 reported turning final (no left base call). The AFISO acknowledged this and asked if they were making an approach to “northside grass” which the R22 pilot confirmed.

At 1213:25 the pilot of the GYRO reported downwind. The AFISO requested a call on final and asked; “are you visual with the R22 on final?” which the GYRO pilot advised that they were not.

At 1213:43 the Eurofox pilot reported right base for “26 north grass”. The AFISO replied; “roger report final, er – you visual with the R22 final and given landing information for north grass runway?”. The Eurofox pilot replied; “er negative visual”. The AFISO advised “roger, he’s approximately one mile”, to which the Eurofox pilot replied “yeah, I’m quite close in”.

Immediately following this another aircraft called for start and departure information. There was a pause before, at 1214:28 the AFISO returned to the Eurofox pilot and asked again “are you visual with the helicopter short final 26 north grass”. The Eurofox pilot replied “er, affirm I’ll have to go round”.

The AFISO was then occupied with the aircraft calling for the airfield information and passing further routing instructions to the R22 on the airfield.

At 1215:22 the Eurofox pilot reported “late downwind again for 26 north grass” and was requested to report final by the AFISO. The AFISO then issued taxi instructions to the previous aircraft and more instructions to the R22 on the airfield.

At 1215:55 the pilot of the Eurofox made a call which could not be deciphered but possibly another “go-around” call. The AFISO immediately called the pilot of the GYRO and advised them; “(GYRO callsign) – (Eurofox callsign) on short finals for north grass. The next transmission was garbled as two separate pilots transmitted simultaneously and so it could not be deciphered. The AFISO then advised; “(GYRO callsign) – (Eurofox callsigns) going around to your left as well”, which the pilot of the GYRO acknowledged. It is assumed from the pilot reports that the Airprox took place at this time.

At 1217:14 the pilot of the Eurofox called downwind right hand again for “26 north grass” and was advised by the AFISO that “(GYRO callsign) also downwind in the?? circuit”. The AFISO then asked the GYRO pilot “are you wanting the main?” The GYRO pilot replied; “just turning er downwind 26 ???”. The AFISO replied “affirm – are you for the main?” The GYRO pilot replied: “I’d prefer the north side grass and I’m happy to extend downwind”. The AFISO advised them that “(Eurofox callsign) is also mid-point downwind for north side grass – are you going to be number 2 to him?”. The GYRO pilot confirmed that they would be, and that they were visual with the Eurofox.

ATSI had access to reports from both pilots and the AFISO, but no investigation report was received from Shobdon ATC.

ATSI reviewed the area radar replay and did not see a contact that could be associated with the Eurofox. The GYRO was identifiable, but a second contact observed at the time was not identifiable, did not manoeuvre in a manner consistent with the report from the Eurofox pilot and also appeared to be prone to "jitter". It was considered equally possible that the contact was associated with a previously landing aircraft which was transponding, (but unidentifiable), and which was manoeuvring on the ground for a number of minutes following landing. The RTF supplied by Shobdon ATC did not have a time-code injection, and the timing given was believed to be up to 2 minutes slow. Times given in this report are estimated after correlation with the radar replay.

The AFISO was dealing with, amongst other things three inbound aircraft, all carrying out different joins. The Eurofox coming in direct to right-base having dropped a tow to the north. The R22 was joining direct to left-base, and the GYRO making an overhead join.

When the GYRO pilot called downwind the AFISO mentioned the R22 on final approach to them. However, when the Eurofox pilot then called on right-base, (their first call in the circuit), the AFISO only mentioned the R22 on final approach and not the GYRO.

The R22 pilot had been requested to report on left-base but didn't report until on final approach. It cannot be determined if the Eurofox pilot might have benefited from that left-base call, with the R22 call on final approach representing the first call made in the circuit by the R22 pilot. It appears that the Eurofox pilot did not become visual with the R22 in time for them to position behind, and they did report that they were "quite close in", and so they elected to go-around for the first time.

When the Eurofox pilot reported downwind after their first go around, no Traffic Information on the GYRO was passed by the AFISO. The GYRO pilot did not call on base, (having been requested only to report final from downwind by the AFISO). No call on final was heard from the pilot of the GYRO although there were two simultaneous transmissions which were garbled at the point at which the GYRO would have been on finals with the Eurofox on base-leg. It appears that the proximity of these two aircraft on final approach led to the go-around of both, and the filing of an Airprox report. The AFISO did pass reciprocal Traffic Information to both pilots during this period.

The AFISO report confirmed the events as above, and that "in talking to both pilots afterwards, they stated that neither had seen the other until they went around".

The pilot of the GYRO reported positioning visually behind the R22 and being aware of, but not visual with, the Eurofox. They reported being unable to make a call on final approach due to "busy R/T", and still being unsure of the position of the Eurofox elected to go-around. It appears that the GYRO pilot then became visual with the Eurofox having been advised by the AFISO that the Eurofox was also going around on their left.

The pilot of the Eurofox reported being aware of the presence of the R22 but not its exact position. When they reported on left-base they were advised about the R22 on final by the AFISO and so looked to their left up final approach. It wasn't until they subsequently turned final that they became visual with the R22 ahead of them already. On their second approach it appears that they weren't aware of the presence of the GYRO until they reported final and saw that aircraft ahead of them.

The unit did state, in subsequent correspondence with the CAA inspector, that as a result of a local investigation they determined that the circuits flown by the tug pilot were leading it into conflict with aircraft established on final. Whilst the matter was to be taken to the airfield Safety Group, they had in the meantime instructed the tug pilots to "fly wider circuits to enable them to have visual contact with traffic on base and final."

Conclusion

The R22 pilot did not make a call on left-base as requested by the AFISO, following which the Eurofox pilot went around. The Traffic Information passed by the AFISO was good and appeared to help resolve the conflict between those aircraft.

The AFISO did however then miss a couple of opportunities to pass sufficient Traffic Information to enhance the situational awareness of the pilots of the Eurofox and GYRO, and to facilitate better integration of those aircraft within the circuit.

As suggested by Shobdon ATC, the circuit pattern flown by the Eurofox pilot may have given them little time to acquire visual contact with other aircraft in the circuit to facilitate effective integration.

CAP797 Flight Information Service Officer Manual, on the subject of Traffic Information requires (Section 2, Chapter 8):

“Whilst generic traffic information provided to a pilot may be useful to indicate how busy the aerodrome environment is, as the pilot gets closer to the aerodrome and is required to integrate with other traffic, specific traffic information is needed in order to achieve a safe, orderly and expeditious flow of air traffic and to assist pilots in preventing collisions.”

and

“Traffic information shall be described so as to be easily identified by the pilot.”

Shobdon ATC is reminded of their obligations under Regulation (EU) 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018, Article 4, paragraphs 6(d) and 7, to submit a mandatory occurrence report, within 72 hours of when they are first made aware of an occurrence, and to conduct an analysis of the occurrence, in order to identify any safety hazards, followed by submission of follow up reports, in accordance with the 30 day and 3 month timescales contained in Article 11 of the regulation.

UKAB Secretariat

The MTO Sport Gyroplane and Eurofox pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹ An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.²

Summary

An Airprox was reported when an MTO Sport Gyroplane and a Eurofox flew into proximity in the Shobdon visual circuit at approximately 1215Z on Monday 20th September 2021. Both pilots were operating under VFR in VMC, both were in receipt of an AFIS from Shobdon.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first discussed the actions of the Gyroplane pilot. They had joined the busy circuit and would have been able to hear the calls from other pilots in the circuit however, they were not given any specific information on the Eurofox (**CF8**). They made a normal downwind call, but were unable to get in a final call and so elected to conduct a go-around. At this point they were given Traffic Information on the

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Eurofox by the AFISO and saw the Eurofox as it also conducted a go-around, which members considered to be a late sighting (**CF11**).

Turning to the actions of the Eurofox pilot, they had joined the busy visual circuit and had already conducted a go-around due to an R22 on final. Members thought that the pilot was probably focused on a quick landing and turnaround and would have been conscious of the trailing tow rope, but in turning to fly a tighter second circuit the Eurofox pilot set up the conditions for the Airprox (**CF5**). In not flying the full circuit, the pilot did not allow themselves enough time to fully appreciate the traffic situation (**CF6**). They did not receive Traffic Information from the AFISO and as the Gyroplane pilot had not managed to make a final call, did not have specific situational awareness that it was also on final (**CF8**). Furthermore, the EC on the Eurofox could not detect the Gyroplane's transponder (**CF9**). However, still members thought that because the Gyroplane was already established on final in the circuit, it was for the Eurofox pilot to have integrated with it (**CF4, CF7**). Noting that the pilot reported being distracted following a wasp sting (**CF10**) members thought that it was a lesson to all that when the unexpected happens, it is usually better to reset and re-focus rather than continue when distracted and thought that with the benefit of hindsight the Eurofox pilot perhaps should have gone around at that point, but that in continuing they flew close enough to cause the Gyroplane pilot concern (**CF12**).

When looking at the actions of the AFISO members acknowledged that it was a very busy visual circuit which was made more complicated by the different aircraft types and the glider towing. Nevertheless, they noted the comments by CAA ATSI that the AFISO had missed opportunities to inform both pilots about each other (**CF1**) and had not provided Traffic Information to the Eurofox on the Gyroplane when it turned downwind (**CF2**). The Gyroplane pilot reported that they were unable to make the final call because the frequency was so busy and the AFISO did not detect the conflict until both pilots were already on the go-around (**CF3**). Members were heartened to hear that Shobdon had reviewed their procedures and would encourage tug pilots to fly wider circuits in the future.

When determining the risk, members did not have the benefit of a radar replay and so did not know the exact separation between the two aircraft. The pilot reports had differing estimates of the separation and the risk of the encounter. Some members thought that there had been a risk of collision given the geometry of the two aircraft as they both turned onto final, however others countered that the Eurofox pilot was visual with the Gyroplane as they elected to go-around, and was behind and out-climbing the Gyroplane, therefore there had been no risk of collision. The latter view prevailed and members agreed that there had been no risk of collision but safety had been degraded; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| | 2021190 | | | |
|--|---------------|--------------------------------------|--|---|
| CF | Factor | Description | ECCAIRS Amplification | UKAB Amplification |
| Ground Elements | | | | |
| • Regulations, Processes, Procedures and Compliance | | | | |
| 1 | Human Factors | • ATM Regulatory Deviation | An event involving a deviation from an Air Traffic Management Regulation. | Regulations and/or procedures not fully complied with |
| • Situational Awareness and Action | | | | |
| 2 | Human Factors | • ANS Traffic Information Provision | Provision of ANS traffic information | TI not provided, inaccurate, inadequate, or late |
| 3 | Human Factors | • Conflict Detection - Detected Late | An event involving the late detection of a conflict between aircraft | |
| Flight Elements | | | | |
| • Regulations, Processes, Procedures and Compliance | | | | |
| 4 | Human Factors | • Use of policy/Procedures | Events involving the use of the relevant policy or procedures by flight crew | Regulations and/or procedures not complied with |
| • Tactical Planning and Execution | | | | |

| | | | | |
|--|---------------|--|--|--|
| 5 | Human Factors | • Action Performed Incorrectly | Events involving flight crew performing the selected action incorrectly | Incorrect or ineffective execution |
| 6 | Human Factors | • Insufficient Decision/Plan | Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation | Inadequate plan adaption |
| 7 | Human Factors | • Monitoring of Environment | Events involving flight crew not to appropriately monitoring the environment | Did not avoid/conform with the pattern of traffic already formed |
| • Situational Awareness of the Conflicting Aircraft and Action | | | | |
| 8 | Contextual | • Situational Awareness and Sensory Events | Events involving a flight crew's awareness and perception of situations | Pilot had no, late or only generic, Situational Awareness |
| • Electronic Warning System Operation and Compliance | | | | |
| 9 | Technical | • ACAS/TCAS System Failure | An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations | Incompatible CWS equipment |
| • See and Avoid | | | | |
| 10 | Human Factors | • Distraction - Job Related | Events where flight crew are distracted for job related reasons | |
| 11 | Human Factors | • Identification/Recognition | Events involving flight crew not fully identifying or recognising the reality of a situation | Late sighting by one or both pilots |
| 12 | Human Factors | • Incorrect Action Selection | Events involving flight crew performing or choosing the wrong course of action | Pilot flew close enough to cause concern |

Degree of Risk: C.

Safety Barrier Assessment³

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the AFISO had missed opportunities to inform both pilots about each other.

Situational Awareness of the Conflicts and Action were assessed as **partially effective** because the AFISO did not provide sufficient Traffic Information.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Eurofox pilot did not conform with the other circuit traffic.

Tactical Planning and Execution was assessed as **partially effective** because in flying a tight circuit following the first go-around, the Eurofox pilot did not sufficiently integrate with the Gyroplane.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Eurofox pilot did not have any situational awareness that the Gyroplane was also on final, and the Gyroplane pilot only had generic situational awareness about the Eurofox.

³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TAS in the Eurofox could not detect the Gyroplane.

See and Avoid were assessed as **partially effective** because the Gyroplane pilot saw the Eurofox late and the Eurofox pilot was distracted and therefore flew closer than ideal to the Gyroplane.

| Airprox Barrier Assessment: 2021190 | | Outside Controlled Airspace | | | | | |
|-------------------------------------|--|-----------------------------|-------------------|---------------------|------|----------------------------|----------|
| Barrier | Provision | Application | Effectiveness | | | | |
| | | | Barrier Weighting | | | | |
| | | | 0% | 5% | 10% | 15% | 20% |
| Ground Element | Regulations, Processes, Procedures and Compliance | ✓ | ! | [Yellow bar to 5%] | | | |
| | Manning & Equipment | ✓ | ✓ | [Green bar to 5%] | | | |
| | Situational Awareness of the Conflication & Action | ✓ | ! | [Yellow bar to 15%] | | | |
| | Electronic Warning System Operation and Compliance | ○ | ○ | [Grey bar to 5%] | | | |
| Flight Element | Regulations, Processes, Procedures and Compliance | ✓ | ! | [Yellow bar to 10%] | | | |
| | Tactical Planning and Execution | ✓ | ! | [Yellow bar to 10%] | | | |
| | Situational Awareness of the Conflicting Aircraft & Action | ! | ! | [Yellow bar to 20%] | | | |
| | Electronic Warning System Operation and Compliance | ✗ | ✓ | [Red bar to 15%] | | | |
| | See & Avoid | ! | ! | [Yellow bar to 20%] | | | |
| Key: | | | Full | Partial | None | Not Present/Not Assessable | Not Used |
| Provision | ✓ | ! | ✗ | ○ | | | |
| Application | ✓ | ! | ✗ | ○ | | ○ | |
| Effectiveness | Green | Yellow | Red | Grey | | White | |