10 GOLDEN RULES

OF VIDEO INTEGRATION

in the operating room

In the operating room (OR), where the increasing use of advanced technologies and an ever-growing number of devices need to work together smoothly, video integration done correctly can bring solace to OR staff members who need to monitor, control and operate an overload of segregated systems and devices. But not all integration efforts lead to substantial benefits. For video integration to achieve its full potential, keep in mind these 10 golden rules:

RULE #1
SIMPLE SETUP

Plug and play of devices is probably the number 1 must-have in the OR. It should be easy to add or remove devices (e.g. navigation devices, machine-controlled applications, PACS equipment, etc.). Also: the less components, the better. It means fewer points of failure and fewer elements to manage.

RULE #2
REMOTE CONTROL

Maintenance and troubleshooting of equipment in the operating room are considered the biggest challenges for OR staff[1]. A good video integration system enables remote diagnostics and data analytics as well as server/PC access outside the OR.

RULE #3
DATA CONSOLIDATION

A good integration system gives you the full picture. It puts an end to segregated data and centralizes all information in the OR – when and where you need it. This also includes access to medical and non-medical information outside the OR (e.g. PACS), flexible sharing of modalities, and flexible image compositions.

RULE #4
NO LATENCY

Display of images during image-guided surgery is seen as the 2nd biggest challenge by OR staff[1]. Live images should be presented without artefacts and without latency to provide the best visual guidance for surgeons. This can only be achieved with a compression-free, high-bandwidth solution.

[1] TheMarkeTechGroup, Survey about the requirements of video integration in the operating room, 2016

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RULE #5
LIVE STREAMING

Live streaming of surgical procedures – to other operating rooms, hospital departments, or even remote locations (e.g. auditorium) – shouldn't be complicated. This is easy to achieve via a high-bandwidth network and secure gateway.

RULE #6
FUTURE-PROOF

The quick adoption of new equipment and technologies is often considered problematic in the OR[1]. Invest in a solution that can evolve over time with your needs. With a networked solution featuring a standard architecture, cabling can be laid in advance and new sources/devices can be added at any time so OR upgrades run quickly with limited disruption.

RULE #7
4K STREAMING

Make sure you can stream high-resolution video, in 4K! 4K imaging in the operating room offers huge benefits in terms of image detail, color richness and depth perception.

RULE #8
ONE UNIVERSAL CABLE

Unified fiber cabling connected directly to devices reduces today's cable clutter and minimizes errors, while providing galvanic separation "for free". Additional benefits: there's no cable length limit, no more broken video cables, and several cables can be laid to easily expand the operating room.

RULE #9
TROUBLE-FREE TRAINING

Training of OR staff can be time-consuming and problematic, as indicated by 63% of OR personnel[1]. A straightforward system that consists of a limited number of components, allows plug and play of devices, and requires just one type of cable simplifies and shortens the learning and adoption curve.

RULE #10
FIT FOR MEDICAL USE

As with any device in the operating room, compliance with sterilization and safety standards is vital to ensure reliability and patient safety. When choosing a video integration platform, make sure every component has been classified as a medical device CE/FDA (class II) and is fit for medical use.