ABSTRACT
ICON plc. utilize a Learning Management System (iLearn). When evaluating training requirements surrounding the implementation of a new or upgraded system application the following approach is typically taken. The System Vendor provides initial training. Upon invitation by the Core Team, Corporate Training and Development (CTD) attend the Vendor training. Following the Vendor training, CTD meet with the Core team and determine training requirements.

The initial training requirements can typically be met utilizing Subject Matter Expert (SME) and On The Job (OTJ) training. Where formal training is required, a kick off meeting is scheduled with the Core Team and CTD. The objective of this meeting is to determine the requirements for and style of training to be implemented. This could be Online learning (OLL) where the trainee registers for and completes training within iLearn. Materials are produced by CTD in collaboration with the core team and SME and approved by the SME.

If a requirement for Instructor Led Training (ILT) is identified then the materials are produced by CTD in collaboration with the Core Team and SME. A dry run of the training course is performed with the SME before the training course goes live. Once the course goes live it becomes part of ICONs series of Business Applications trainings and is scheduled on a predetermined required frequency.

INTRODUCTION
This paper reviews methods of and approach to Business Applications training. We examine ICONs overall approach to training with focus on training requirements around the implementation of a new or upgraded systems application.

METHODS OF TRAINING
ICON plc. has a dedicated global training department, Corporate Training and Development (CTD). The CTD group support multi-level training across the ICON divisions and utilize a Learning Management System, iLearn, to support and document all training.

The types of training supported by and delivered at ICON include the follow:

- Job Focused Training,
  - Instructor Led Training (ILT)
  - Online Training (OLL)
  - On the Job Training (OTJ)
- GCP Regulatory Training
- SOP / Policies
- Client / Study Specific Training
- Professional Skills
- General Management Training
- Project Management Training
- Therapeutic Area Training
- Business Applications Training
- External Applications Training
This paper focuses on ICON CTD departments approach to implementing training for new or upgraded systems applications being implemented at ICON. Exhibit 1 below demonstrates a typical approach to delivering new or upgraded system applications training requirements:

INITIAL VENDOR IMPLEMENTATION TRAINING
When a department or departments identify the requirement for implementation of a new application or an application upgrade, a Core Team is established to oversee the implementation. The Core Team is comprised of individuals including representatives from the following groups, as required:

- Operational departments or End Users,
- IT representatives,
- CTD representatives,
- Vendor representatives.

Any other group involved in the roll out and use of the application or application upgrade will also have representation on the Core Team.

The initial training requirements are a key aspect of the integration planning. As part of the initial discussions the approach to and plan for training requirements are prioritized.

Considerations for training requirements center on requirements for systems user training including:

- System set-up
- Programming and maintenance requirements
- End User training.

In the event that a new system or system upgrade is being integrated and adapted to meet specific ICON requirements the Core Team works with the System Vendor to review system functionality and identify specific system requirements and any plans for adapting the system to meet specific requirements.
Typically the System Vendor provides initial training in system set-up, programming and maintenance requirements to a core group of Subject Matter Experts or SMEs. This training could take place as a face-to-face training with system experts providing detailed training covering all required areas. Likewise, the training could be rolled out as remote live training or pre-established online training. The training may be compiled of a number of modules and may require certification or follow-up training depending on the system.

It may be that the system is being implemented to add functionality to a pre-existing system or a new version or a version upgrade. In this case a discussion takes place with the System Vendor to determine the level of training required. If SME training is required this could take place as a face to face training or could be conducted as a remote training using webinar or live meeting tools. Alternatively, the training requirement could be met with preexisting training manuals or user guides or with online training already available from the Vendor.

All System Vendor training provided is documented and a record of same updated as External Business Application Training within iLearn for all individuals completing the training.

**SUBJECT MATTER EXPERT (SME) TRAINING**

As discussed in the previous paragraph one of the more successful methods of initiating training in a new system is to have the System Vendor provide detailed training for a core group of SMEs. The SMEs are individuals who have qualifications and experience suitable for the system being implemented and undergo intensive training in the new system. Typically the SME team are also part of the Core Team for system implementation and have strong involvement and key roles in setting up and establishing the system within ICON.

With such a high level of involvement in the implementation of the system and completion of intensive training the SME team are regarded as the experts in the system functionality and become ‘go-to’ staff members while the system is being rolled out across required areas. This enables them to provide advice and expertise for new staff members being introduced to the system for the first time as well as to provide OTJ training as and when required.

**ON THE JOB TRAINING (OTJ)**

OTJ training style is utilized frequently where there is strong system expertise within an operational department. OTJ codes are created within ICONs LMS iLearn. These also allow the departmental groups to determine OTJ requirements for their team. The ability to predetermine a key set of OTJ training requirements for individuals is aided greatly by the existence of OTJ codes. These codes enable a manager to allocate OTJ training requirements for an individual within iLearn and to follow up on timelines and completion of these requirements.

With regards new or upgraded systems training OTJ training is typically the first approach for the wider roll out of training requirements. The group of key SMEs who have undergone training with the Vendor provide the initial OTJ training. A formal or informal training plan is implemented by the affected departments. OTJ training is provided either in formal class room sessions as required or individual OTJ training depending on system complexity and requirements.

The system functionality expertise can also be passed on from the SMEs to other relevant department members by implementing train the trainer sessions. Train the trainer sessions consist of a formal roll out of the OTJ training to identified future trainers who then complete teach back sessions with the SME. Teach back sessions are compiled by having a trainee trainer provide the session for the SME and having the SME critique the training approach and session materials and approve the trainee trainer as a future trainer for that session.

All OTJ training is documented and a record of completion of training is entered into iLearn for all individuals. An individuals manager or a member of the CTD department can update OTJ completion within iLearn.

**ONLINE LEARNING (OLL)**

In line with the initial Vendor SME training CTD are involved in identifying the requirements for SME and OTJ training. The next step is to formulate a training plan for the roll out of the system training and associated end user training requirements. CTD meets with the Core Team to discuss training requirements. The objective of this meeting is to determine type and style of training required. OLL training involves creating course content which is developed as presentation or HTML style. Presentation style OLL training allows a trainee to move through a series of slides with the choice to listen to an audio instructor or to read the training instruction while reviewing the slides. Usually a trainee is required to take an online knowledge assessment upon completion of training before electronic sign-off within the system is allowed. A requirement of an 80% or higher pass rate on the knowledge assessment is typically set. HTML style OLL training allows a trainee to navigate through training pages, respond to questions and view automated demos during the session. As with presentation style the individual can listen to an audio instruction or may choose to follow the training content without audio. Typically a trainee would be required to navigate every page within the course before being permitted to electronically sign off completion of training within
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iLearn. HTML style OLL training is frequently employed for systems training requirements. Where there is a requirement to provide informational systems training this can be provided utilizing presentation style.

Along with the Core Team and required SMEs, CTD draft training requirements for End User Training. The first step is to identify who the End Users are and variations in training requirements across the different groups of End Users. There may be a requirement for informational training for a wider audience while key groups will require more detailed End User Training.

The training could then be broken down into subheadings. An example of such a break down of subheadings could be as follows:

- System Overview
- Navigation
- Development Overview
- Development Environment
- System functionality
- Outputs
- Account Access

Utilizing SME expertise and advice and available Vendor training materials such as manuals and training session materials CTD develop draft OLL training materials. The draft training materials are distributed for SME review to the assigned SMEs. Upon completion of review the SME team provides comments, suggestions and corrections to training materials. The draft training materials are updated and returned to SME for second review. This review process continues until the SME group is satisfied with the materials at which point the materials are sent to the OLL course design group within the iLearn Administration group. The course materials undergo a format review. Upon completion of the format review the course content is returned to the SME group for final approval. Once the SME group provides final approval the course is deemed as final first version and a development review is completed before the course is published in the iLearn system.

An additional function of the iLearn system is the ability to publish course materials on the course page. Course materials could be User Guides or Manuals which allow the Trainee to review and/or print the materials prior to taking the training and for future reference.

Once the course is published in iLearn it is available for registration and completion. If required the course can be added as a mandatory training requirement to an individuals assigned training requirements or the individual can register for and complete the training themselves. The individuals Manager can also register the person to complete the training within iLearn.

Evidence of completion of the formal End User Training is required before system access is granted.

INSTRUCTOR LED TRAINING (ILT)

A requirement for ILT style training may identified by the Core Team and CTD. Where there is a need to show detailed demonstration of the system or to allow for questions and answers sessions facilitated by an instructor ILT training is required. The complexity of the system plays a large part in determining the style of training and number of different courses required. There could also be a requirement to allow hands on navigation or programming within the system with expert supervision. In the event that ILT trainings are deemed to be required CTD meets with the Core team to identify required content of and materials for training. CTD then develops training materials including presentations and workshops. A SME review of the materials is completed and this review cycle continues until final materials are produced and approved. In the event that training materials are already available from the System Vendor these could be utilized instead of producing new materials.

Once the materials for the ILT session or sessions have been produced and finalized a dry run of each session is conducted with the SME group. This is an opportunity for the SME group to see the course live and to provide any feedback or improvements they may have on the course delivery and course content.

Instructor led training can be rolled out as face to face class room training or remote training using webinar or live meeting functionality. A combination of face to face and remote training can also be implemented in order to facilitate multiple locations.

Once the ILT materials are final and approved the required frequency of sessions is discussed and agreed with the operational groups and the Core Team for implementation of the system. The required courses are then scheduled
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in iLearn, the course time and location is provided along with any other required details such as log on details for remote sessions. A trainee or their manager can register for an ILT session and the individual receives an electronic invitation to attend the training.

Once the course goes live notification is sent to the relevant departments and the course becomes part of ICON CTDs series of business application trainings.

Upon completion of the session the Instructor is required to sign off each individual as having met all requirements of the training course. There is a requirement that an individual attends at least 80% of a training course to be considered to have completed the course. This is at the discretion of the Instructor who can ultimately determine if a person has completed all requirements for a course.

CONCLUSION

In conclusion this paper has assessed the approach to training requirements surrounding implementation of new or upgraded applications. The initial training requirement is assessed by the Core Team implementing the system in ICON in consultation with the CTD department. Typically the system vendor provides the initial training to a core group of SMEs. The next stage of training is met using on the job training delivered by the SMEs or trained members of the operational department. Once the initial training requirements have been met the Core Team meets with CTD to discuss formal training requirements these can be met using OLL training within ICONs LMS, iLearn or Instructor Led Training can be implemented at a defined frequency.

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