**Idea of this paper**

Hereby, a brief but substantial overview of the IT4BI master thesis procedure shall be given, in order to clarify the mandatory IT4BI regulations & workflows for

* finding relevant and challenging master thesis topics for the IT4BI 4th term students,

(starting in late summer/early autumn of the resp. year, and being finalized around Nov 15 / latest on Dec 10, for all IT4BI universities, except TU Berlin with its later semester schedule, here we go with Dec 20 / latest on Jan 10)

* the phase of conceptual and practical work, and, in parallel, writing the thesis,

(which in all cases will be exactly 6 months after the formal commitment of the thesis by the university administration, then the thesis must be delivered, but the very latest at July 31, see below)

* and, finally, the process of delivery (see above and below), defense (see below), assessment and grading of the theses.

The consortium of IT4BI universities hereby follows the IT4BI strategy, contracted by the partners agreement, to have a maximally unified procedure for all partners, in order to allow for comparable qualities of the theses, obviously being written under completely different conditions and settings as well in the university groups, as also including (potentially, but not necessarily) industrial partner arrangements.

Important legal remark:

We use the terms ‘advisor’ for the person(s) in university (and as well for potentially collaborating partner companies), scientifically mentoring and methodologically/technically ‘advising’ a master thesis, e.g. professors, lecturers, post-doc researchers, Ph.D. students, (graduate or post-doc) project researchers or industrial partners. The term ‘supervisor’ refers to the responsible university professor/head of department, who officially and legally is allowed to sign the respective documents towards university administration and examination office[[1]](#footnote-1). In case of non-master-hosting universities (ULB and UFRT), who, of course, also will suggest topic areas, and may provide concrete master topics in agreement with the resp. (hosting) partner university of the student’s specialization, and, finally, advise and guide a master thesis, the legal regulations of the IT4BI hosting universities say that the first supervisor must be taken from the specialization university (as the ‘home university’), but the second supervisor in this case will be from the ‘advising external university’. In special cases, another university, not being member of the IT4BI programme, in coordination with the specialization university, also can be chosen as advising university. The corresponding professor will act as second supervisor.

1. **How to find a master topic**

After the initial phases (term 1 in Bruxelles, term 2 in Tours/Blois), all IT4BI students – depending on their choice of specialization and, thus, affiliation – attend the specific 3rd term classes in Barcelona, Berlin or Paris.

Within the first 6-8 weeks of these classes, the students will detect their favorite classes and topics (and also: teachers), identifying a master topic area of his/her individual interest (cf. also <http://it4bi.univ-tours.fr/home/the-it4bi-experience/masters-thesis/> showing some of the topic areas). This process is continuously supported (let us call it: “mentored”) by the teaching staff, and, additionally, by other researchers in the resp. university groups, and, potentially, collaborating associated industrial partners.

After approx. 6 weeks in the third term, detailed discussions about potential candidate topics (e.g. supporting PhD thesis in the resp. group, or: supporting project work in third party research projects, or in an industrial collaboration, etc.) will take place among the teachers/mentors (who later on will become the advisor(s) of the thesis) and the IT4BI master students on a one/two-by-one or (sometimes, if there are many adjacent topics) one/two/many-by-many basis.

(Note: This process also can include the other IT4BI partner universities of the first/second term: ULB and UFRT.)

This is the starting point for developing a proposal and a preliminary title of the thesis (*cf. the IT4BI proposal template*), addressing the points of: Background/general scientific goals, and specific realization aspects (plus some time frame) on the basis of the literature studied until now, and in direct discussion/ mentorship with the supporting advisor. However, the proposal itself must be written by the master student, in order to give a personal commitment to the goals of the thesis, and in order to prove his/her familiarity with the topic.

After some iterations among advisor(s), supervisor(s), and potential partners, the latest after three months (i.e. around Dec 10, for the partners ECP, ULB, UFRT, and UPC, starting the 3rd term in the begin of September, respectively, around Jan 10, for TUB, starting the winter term around mid of October), the final version of this proposal must have been agreed by the master student and his/her advisor(s) by signature, and by the responsible supervisor/coordinator by approval. Now, the official work phase starts, officially certified by university administration with a starting date, and a date of required delivery of the thesis.

1. **Working Phase**

WORK HARD AND CONTINUOUSLY! Regular meetings and consultations with your advisor(s) should take place every few weeks (in case of relevant matters or problems maybe even more often), additionally there might be a few meetings with your supervisor, if manageable. Skype or other video/audio conference meeting, e.g. together with external advisors (or in case of company arrangements) can be useful, but face-to-face meetings are much more valuable.

In case of any kind of personal or scientific problems, please contact your advisor immediately – most of the problems can be solved in trustful and open communication.

1. **Finalization of the thesis: delivery, local presentation, official defense, assessment and grading**

The thesis must be timely submitted – according to the rules of the hosting university, this is: UPC or TUB for the first IT4BI cohort, later on: ECP, UPC or TUB) – in printed and/or electronic form. The rules of the university’s examination office will be communicated to you locally. (E.g.: TUB requires submission of printed and bound copies to the central examination office, whereas UPC requires submission in electronic form as a PDF file.) In any case, the submission must be done precisely in the time frame given to the individual student by the responsible university, otherwise it will be failed!

This is the starting point for the advisor(s) of a thesis to prepare a first version of the review & assessment document (*cf. the official IT4BI review & assessment template*) from the local advisors’ viewpoint (detailed texts!, including a proposal for a grade/range of possible grades).

For our consortium, in preparation of the final assessment and defense workshop, we also require the submission through the EasyChair conference system of all the theses at the very latest >>> by July 31 <<< of the resp. year. Late submissions may result in cancellation of the corresponding thesis defenses. More information about the submission procedure will be timely given.

The final assessment and defense workshop is MANDATORY for all IT4BI students without exception! The workshop will be scheduled early in the year of the forthcoming theses deliveries, in order to guarantee availability (and allow for early booking of flights/accommodation) of all students and of all IT4BI steering board professors. The workshop location, the concrete schedule and the surrounding program/organization of assessment and defense workshop will be published and communicated by email, latest in begin of August by the hosting university.

According to the rules and regulations within the responsible IT4BI university groups for the IT4BI master thesis supervision, there will be different forms of a local defense/presentation in the resp. research groups, upon which a short protocol in the review & assessment template will be stated by the advisor(s)/supervisor/local programme coordinator in the resp. part of the local review & assessment document (*cf. the official IT4BI review & assessment template*). These documents will be known to all IT4BI steering board professors, participating in the final assessment and defense workshop, in advance. The final results of each thesis will be fixed and officially stated in the IT4BI steering board meeting after the defenses of all students.

1. **Special Remarks on Scientific Quality and Practical Relevance wrt. Industrial/Project settings**

As IT4BI is a programme aiming at “business” (and even more: “business intelligence”), there will be many interesting topic areas, and even thesis topics, in close collaboration with industry. The IT4BI partners support this idea, but these kinds of collaborations require a clear setting of roles and responsibilities:

1. The scientific quality / relevance / finally: acceptance of each master thesis topic (as written down in the proposal) must be formally agreed and guaranteed by the responsible university (=> advisor, => supervisor).
2. There must be at least one advisor from the corresponding university.
3. Given the situation of a company hosting the thesis, there must be at least one named advisor from the collaborating company – this person also will be obliged to write a review and assessment (not necessarily our formal template, it may be an informal document/email).

(Both/all of them must agree upon the written proposal, and declare this by their signature – if not manageable in case of distance, by an email declaration)

1. In case of conflicts, the opinion/rules of the university will have a higher rank.

1. Obviously, the advisor and the supervisor can be the same person. [↑](#footnote-ref-1)