University of Stuttgart
Germany

Program Reviews at Stuttgart U

IMPALA Project

Mannheim Training Workshop

Dr. Susanne Klöpping

University of Stuttgart
Stabsstelle Qualitätsentwicklung

Stuttgart U

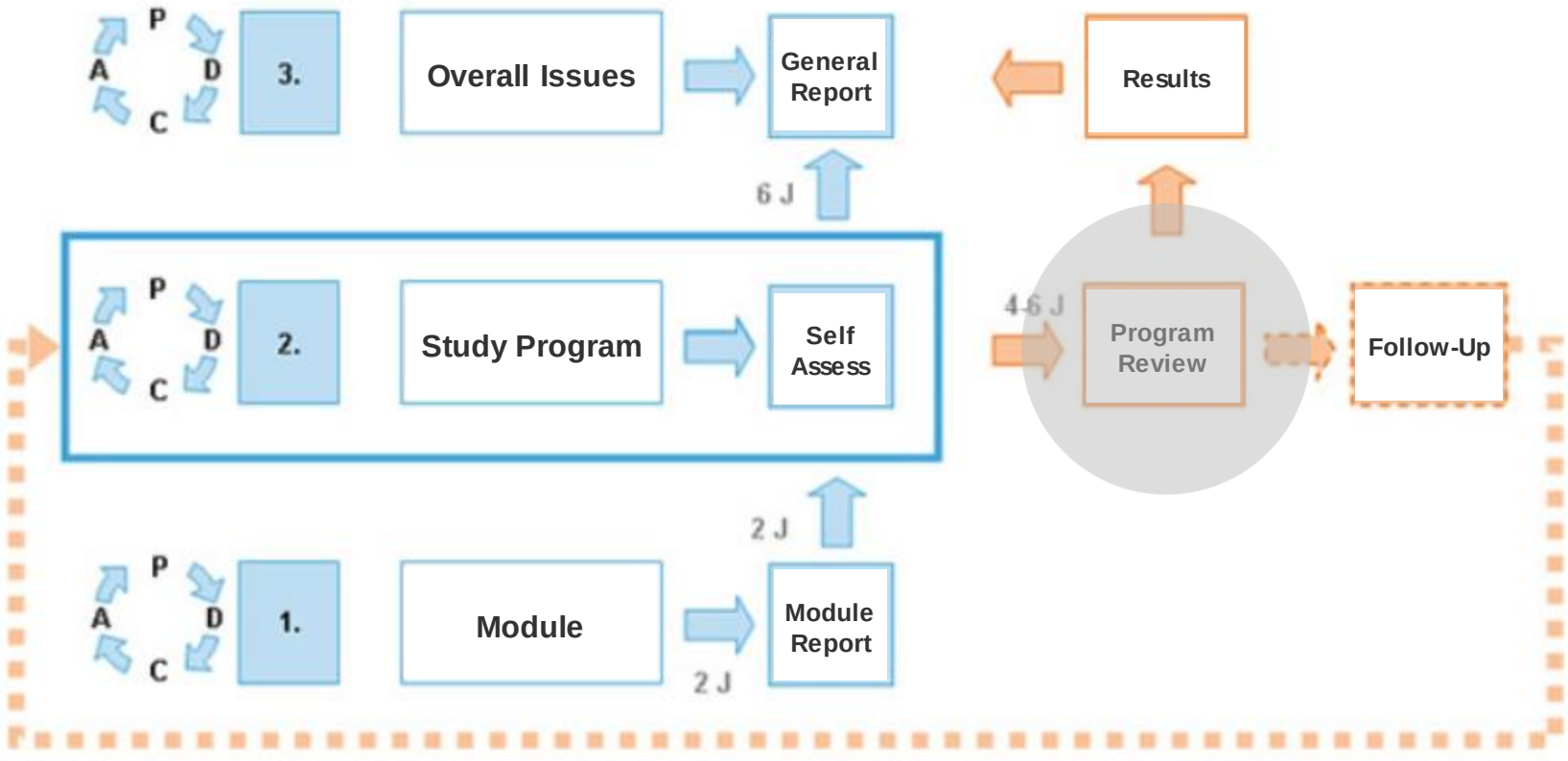
… at a Glance

10 faculties, 28.000 students, 1.400 academic staff members

- Faculty 1 - Architecture and Urban Planning
- Faculty 2 - Civil and Environmental Engineering
- Faculty 3 - Chemistry
- Faculty 4 - Energy Technology, Process Engineering and Biological Eng.
- Faculty 5 - Computer Science, Electrical Engineering and Information Tech.
- Faculty 6 - Aerospace Engineering and Geodesy
- Faculty 7 - Engineering Design, Production Engineering and Automotive Eng.
- Faculty 8 - Mathematics and Physics
- Faculty 9 - Humanities
- Faculty 10 - Management, Economics and Social Science

P
A
D
C
3.
2.
1.
esults
ogram
eview
Follow-Up
oaq
Das Organ für Akkreditierung und Qualitätssicherung
der schweizerischen Hochschulen OAQ
verleiht im Auftrag des Akkreditierungsrates
DAS GÜTESIEGEL
Stiftung zur Akkreditierung von Studiengängen in Deutschland
Akkreditierungsrat
für die
SYSTEMAKKREDITIERUNG
der
UNIVERSITÄT STUTTGART
Die Systemakkreditierung ist gültig bis
31. März 2019
Zürich, 27. September 2012
Prof. Dr. Dieter Euler
Präsident Akkreditierungskommission
Dr. Christoph Grolimund
Direktor OAQ

SEM – The Stuttgart Evaluation Model



Program review – what are we interested in?

Aims of the review process

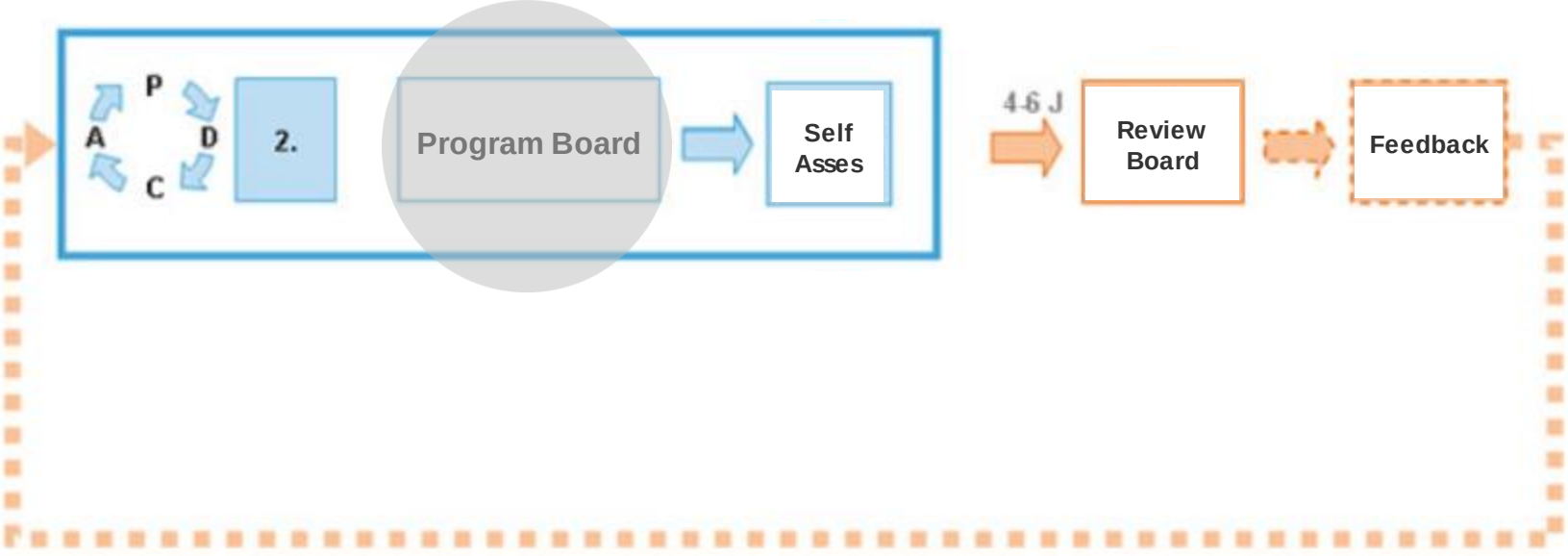
- The **central role of the self-assessment** in the preparation of the review process leads to an increase in reporting quality.

- The review boards **involve all stakeholders :** chaired by the vice-rector, all boards consist of 2 professors, 1 staff, 1 student representative, 2 program students).

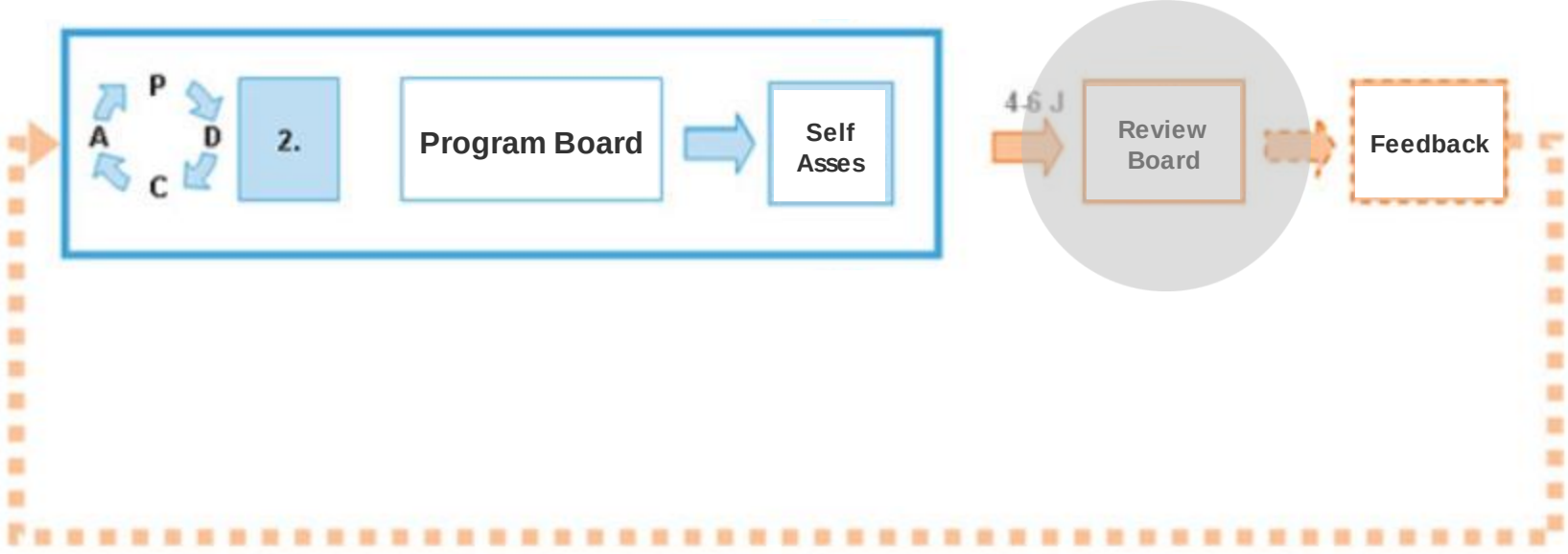
- The review results **incorporate the external** evaluation **and** the results of the **internal** discussions of the review boards, thus providing a comprehensive basis for further action

- the review process **initiates discussions** (pre- and post-review) regarding the further development of the program on **all levels** (program as well as university management)

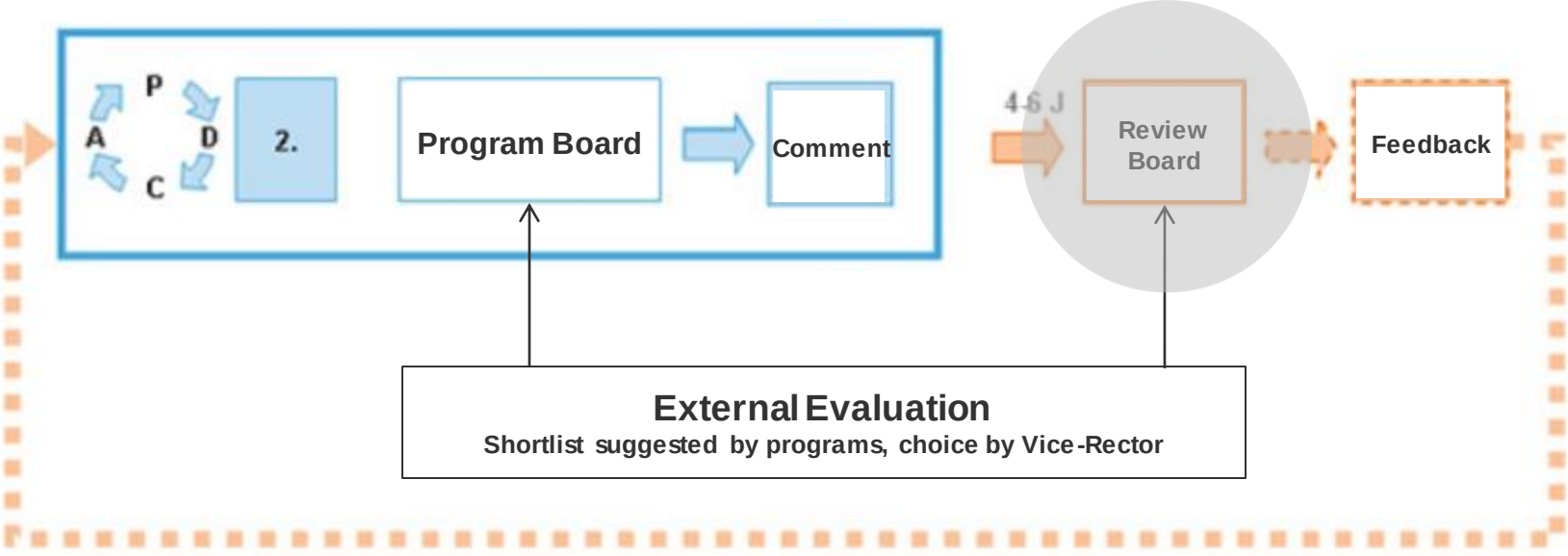
SEM – Internal Mechanism



SEM – Internal Mechanism



SEM – External Element



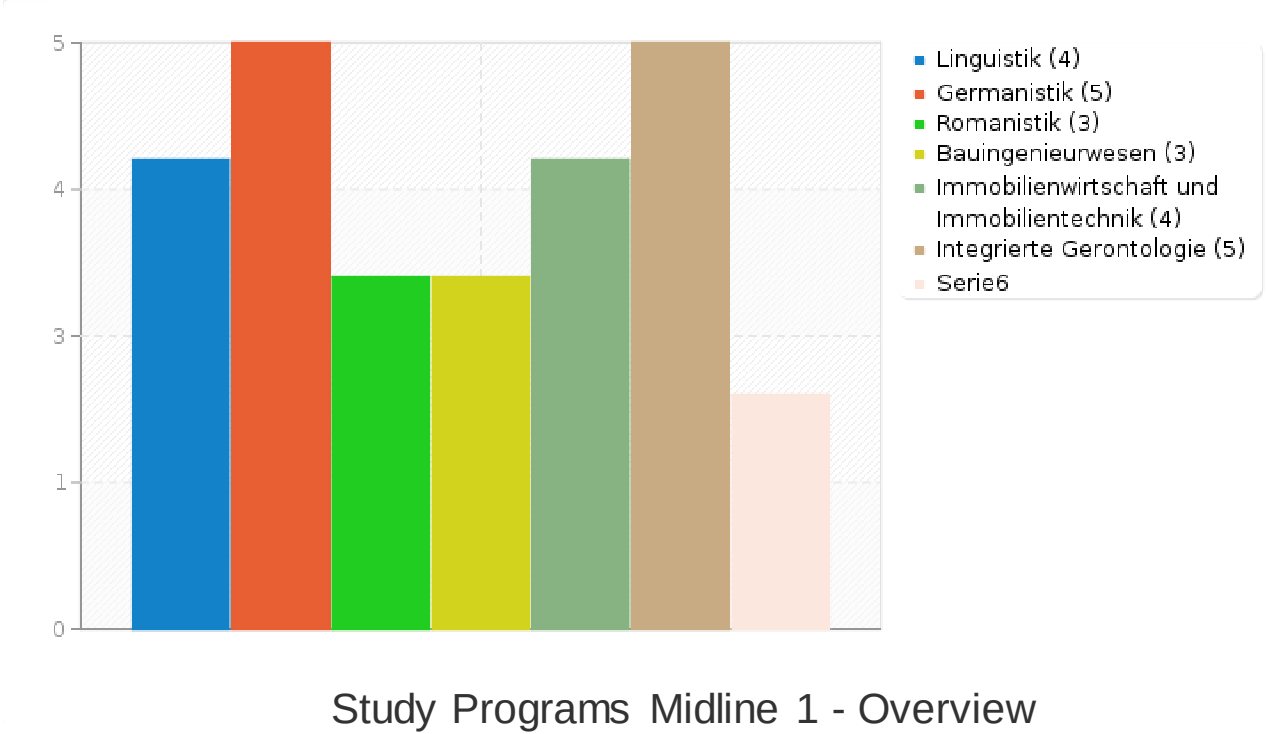
Sample for baseline and midline studies

Members of program boards and review committees

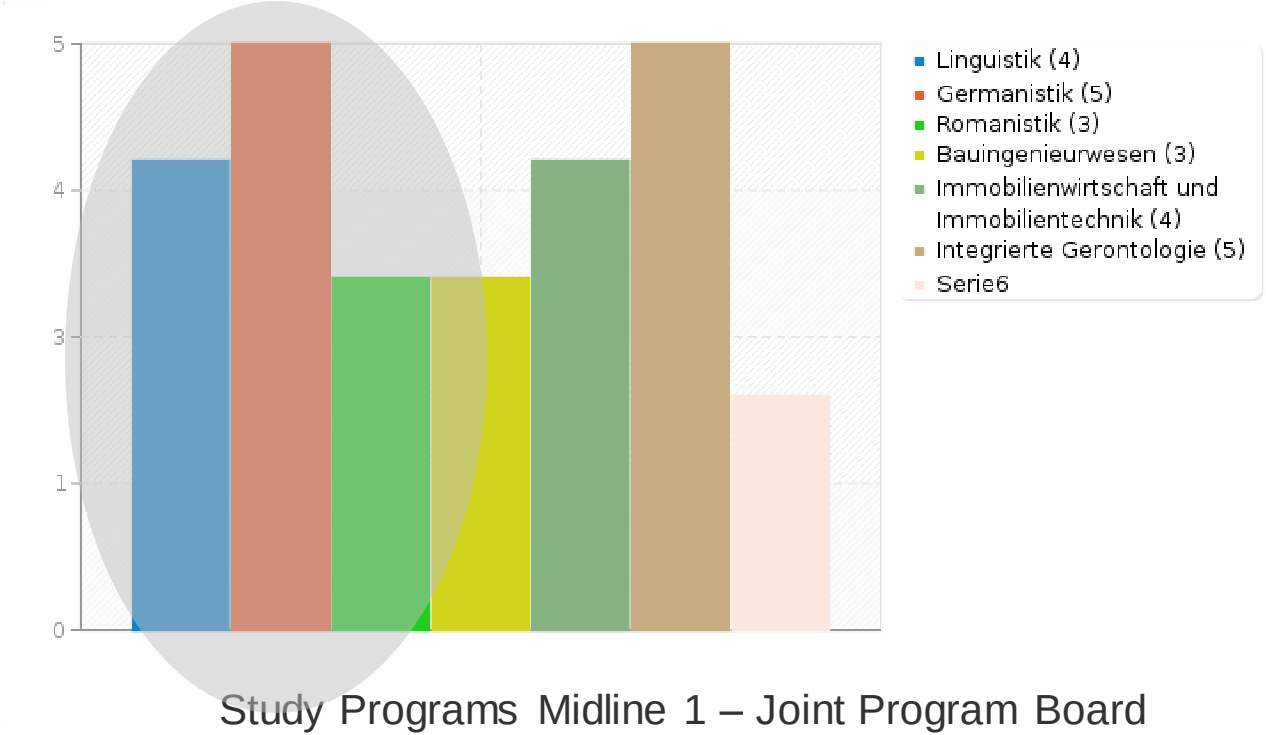
Group 1 (2014-15)
Civil Engineering (BSc/MSc)
German (BA/MA), Linguistics (BA single, double/MA), Romance Studies (BA single, double/MA)
Real Estate Engineering and Management (BSc/MSc)
Integrated Gerontology (MA Online, program will be discontinued)

Group 2 (2015-16)
Automotive and Engine Engineering (BSc/MSc)
Renewable Energies (BSc), Energy Engineering (MSc)
Engineering Cybernetics (BSc/MSc)
Informatics (BSc/MSc), Software Engineering (BSc/MSc)
Mechatronics (BSc/MSc)
Physics (BSc/MSc), PHYSICS (MSc in English)
Technology Management (BSc/MSc)

Focus midline

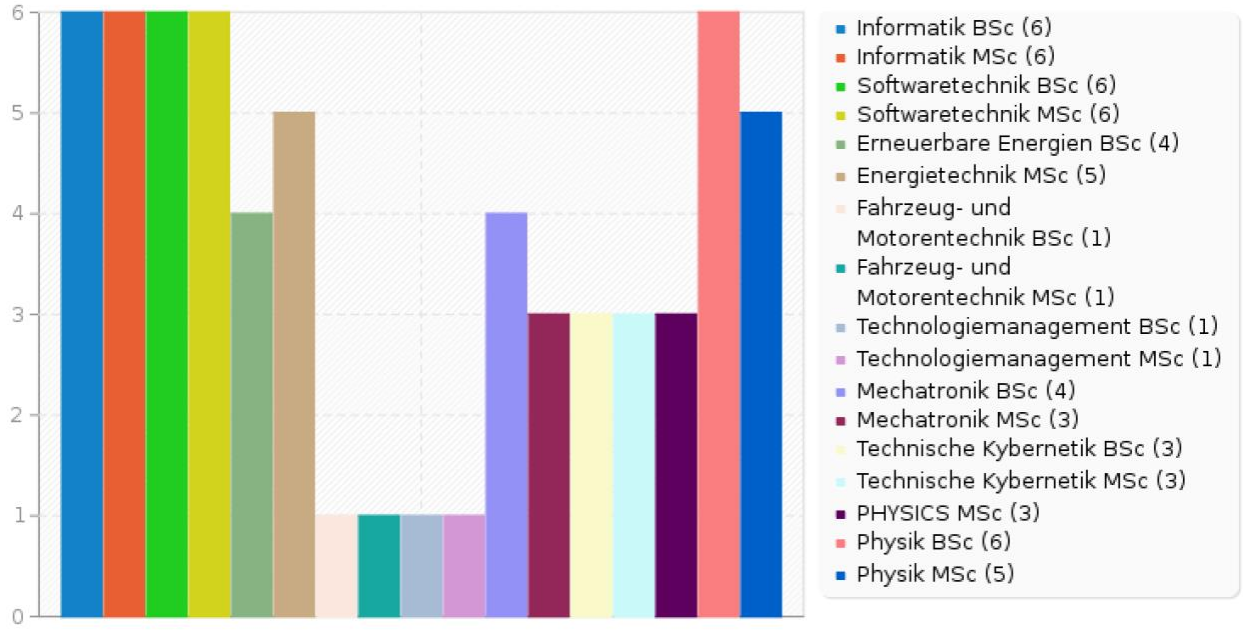


Focus midline



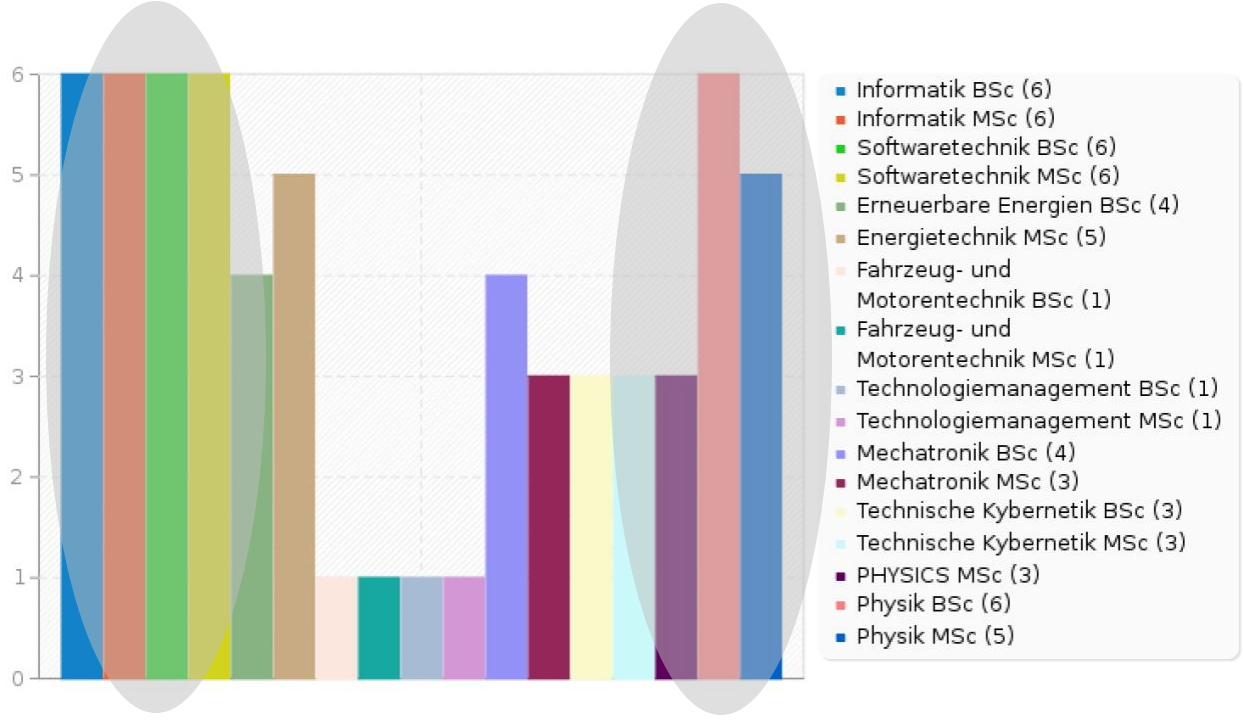
Study Programs Midline 1 – Joint Program Board

Focus midline



Study Programs Midline 2 - Overview

Focus midline



Study Programs Midline 2 – Joint Program Boards

Timeline and sample size baseline 1/2 and midline 1/2

Members of program boards and review committees

Group 1 Baseline (07-08/2014)		Group 1 Midline (04-05/2015)	
Invited	Participated	Invited	Participated
39	12	36	22
4 program boards responsible for 13 study programs (planning, engineering, humanities)			

Group 2 Baseline (07-08/2015)		Group 2 Midline (02-03/2016)	
Invited	Participated	Invited	Participated
85	38	85	28
8 program boards responsible for 17 study programs (natural sciences, engineering)			

Focus midline

Comparing the sample groups – general issues

- Learning curve: the first group went through the first “proper” review process - previously we only had a pilot review with two programs.
- Changes in the process: program representatives of the second group were asked to participate in a part of the review committee session to clarify and discuss critical points .
- Extensive communication: more information and consultation sessions with programs were offered at the start of the review process.
- But: small sample size does not allow for aggregation of data and far-reaching conclusions!

Focus midline

Positions on external evaluations

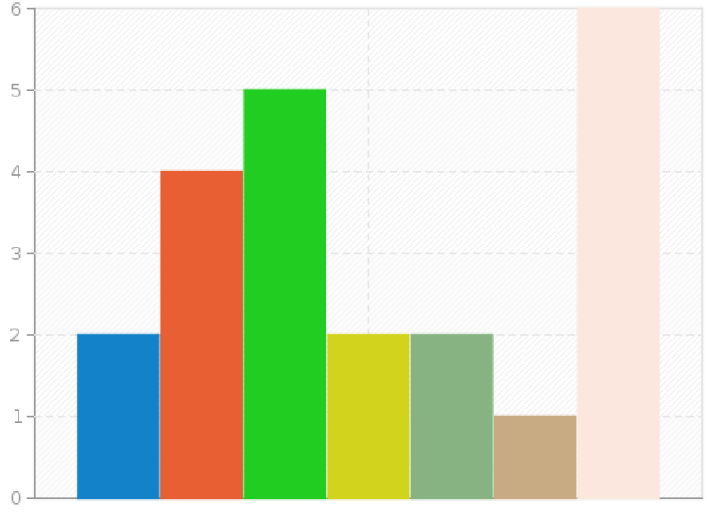
- External evaluations were mostly in tune with the idea of a "**critical friend**" commenting – they mostly included some constructive criticism but mostly stressed positive.
- Both groups overwhelmingly reported that the external evaluations were discussed in the study boards and a majority saw the evaluations as **initiating discussions** about the program.

- Participants overwhelmingly saw the external evaluation as **confirming the strengths** of the programs showing that they are "on track" – comments sometimes downplayed critical issues.
- Regarding the question whether weaknesses and, thus, **potential areas of improvement** were identified by the external evaluation the participants are split (roughly) even in both groups.

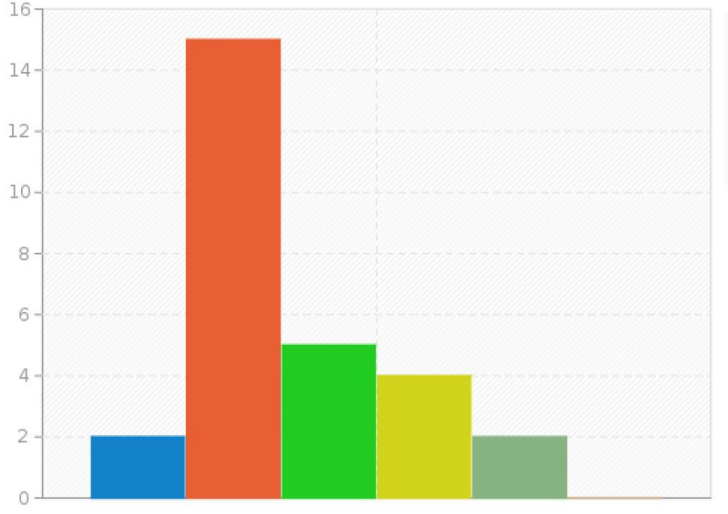
Focus midline

Comparing review board feedback I – organization

„Recommendations of the review board regarding **organization** will help to improve the program“



Midline 1



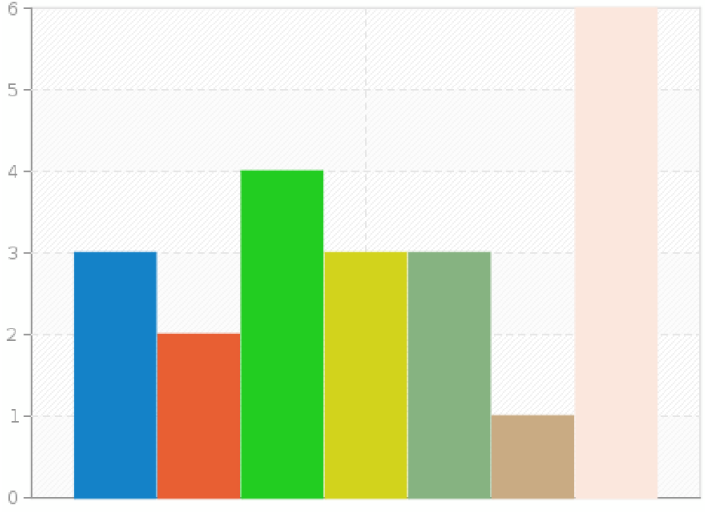
Midline 2

Answers: agree – partly agree – partly disagree – disagree – don‘t know (– no answer – not completed)

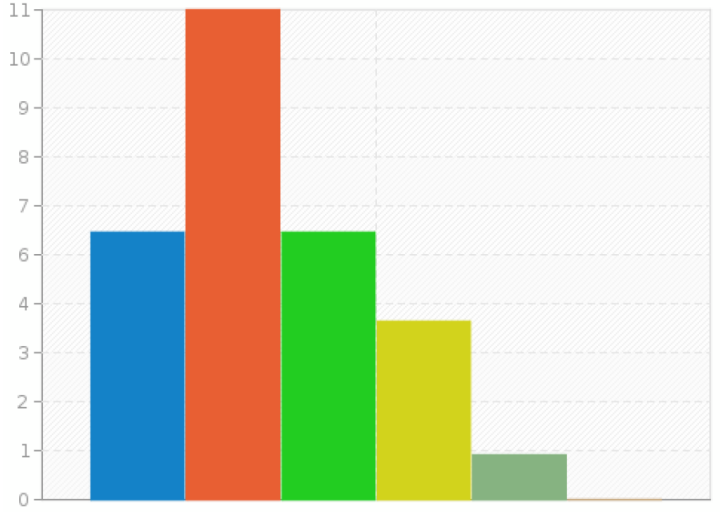
Focus midline

Comparing review board feedback II – content

„Recommendations of the review board regarding **content** will help to improve the program“



Midline 1



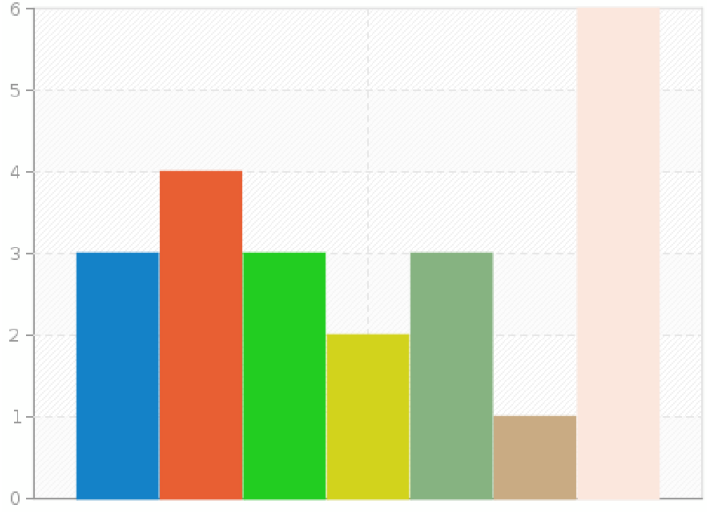
Midline 2

Answers: agree – partly agree – partly disagree – disagree – don‘t know (– no answer – not completed)

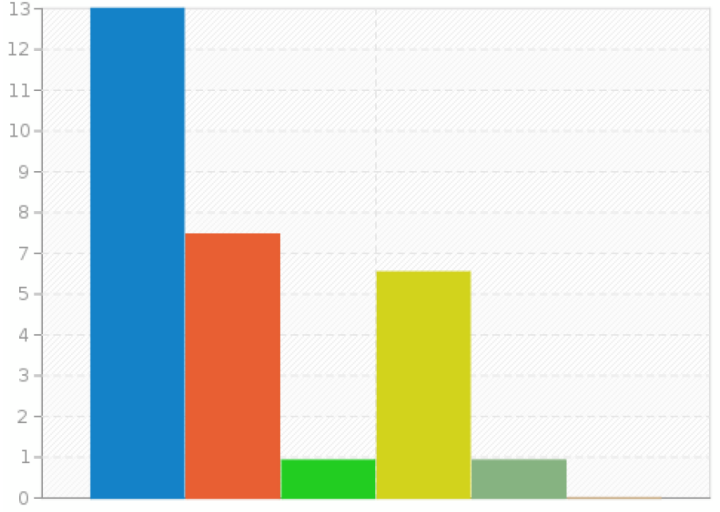
Focus midline

Comparing review board feedback III – transparency

„Recommendations of the review board were **comprehensible** for the program board“



Midline 1



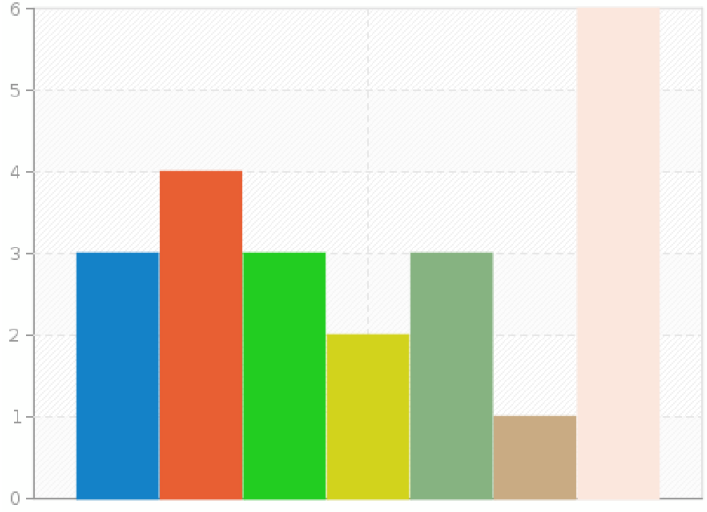
Midline 2

Answers: agree – partly agree – partly disagree – disagree – don‘t know (– no answer – not completed)

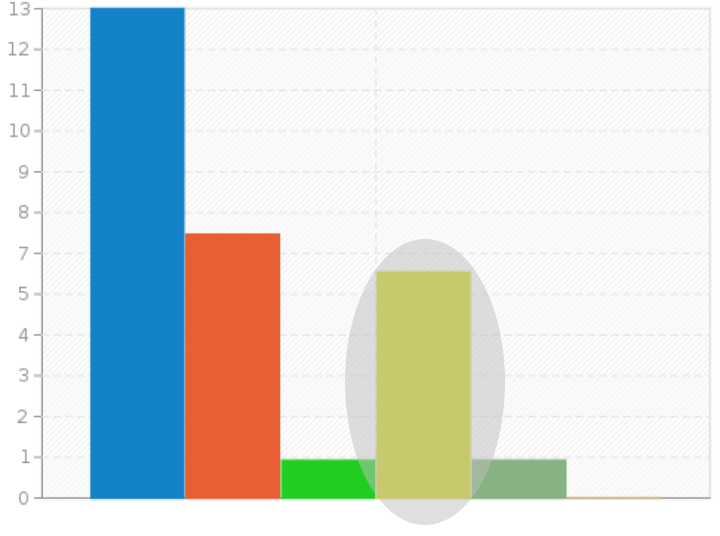
Focus midline

Comparing review board feedback III – transparency

„Recommendations of the review board were **comprehensible** for the program board“



Midline 1



Midline 2

Answers: agree – partly agree – partly disagree – disagree – don‘t know (– no answer – not completed)

Focus midline – what do we learn?

Did we reach our aims?

- **Quality of reporting** did increase in many cases though experiences from the review process suggests that it might not be related – there rather might be a trend to "overreport".
- **Involvement of all stakeholders** could mostly be ensured but turned out to be problematic on two counts: motivating students from every program and having professorial representation from roughly comparable disciplines .
- **Incorporation of external** evaluation **and** the results of the **internal** discussions was lacking. Programs need more extensive feedback to improve acceptance from critical corners and used the lack of reference to the external evaluation to repudiate the overall feedback.
- **Initiation of discussion** was certainly achieved – though not always with the intended outcome! Critical points already came through in the pre-review discussions and were carried through to the post-review feedback and might have the potential to damage established processes.

Focus midline – what do we learn?

Some conclusions

- Self-reporting has become professionalized and results needs to be validated by combining the external evaluations and discussions in the review board. Furthermore, **reporting frequency** has to ensure that it is realistic to actually plan and initiate measures that can be reported.
- Recommendations of the review board must be **well reasoned** and **appreciative** and include both the external evaluation and the internal discussions. Ideally at least one professorial member of the board should come from a somewhat related discipline – program already have a hard time accepting criticism from "outside".
- The test for the acceptance of the review procedure is the **first critical case** – do programs accept an intervention or critical remarks from outside their own expert culture (intended) or do they just "play along" as long as the process is affirmative (rather not intended).

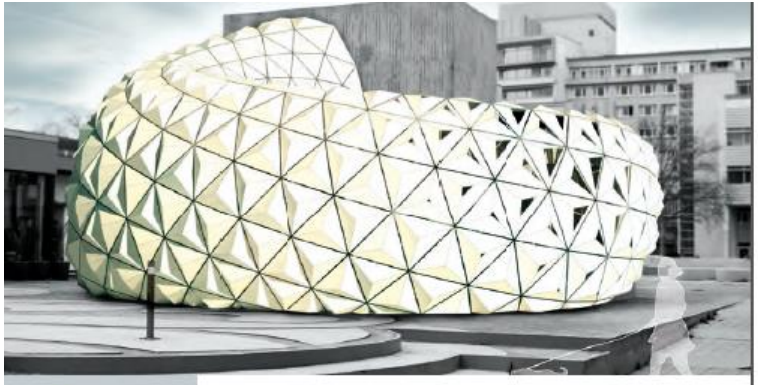
University of Stuttgart
Stabsstelle Qualitätsentwicklung

S E M

The Stuttgart Evaluation Model

Internal cycle every 2 years	External cycle every 6 years
Courses and modules are subject to **regular surveys** and evaluations	Self-evaluation report and additional material is subject to **external evaluation**
Program-based **information** on qualification goals, infrastructure, students, successful completion, graduate surveys etc. is provided	Part 1: Organizational and formal aspects evaluated by the **internal** quality assurance staff
Program director and program board use the information to prepare a **self-assessment** report	Part 2: Subject-specific and Curricular aspects evaluated by **external** expert from the discipline
Written **feedback** prepared by the quality assurance staff and approved by the vice rector	Assessment of evaluation and formal aspects discussed by **review board** and preparation of written feed-back

University of Stuttgart
Stabsstelle Qualitätsentwicklung



4

Bachelor's Programs

Engineering Sciences
- Aerospace Engineering B.Sc
- Architecture and Urban Planning B.Sc.
- Automotive and Engine Technology B.Sc.
- Civil Engineering B.A. (minor subject)
- Civil Engineering B.Sc.
- Computer Science B.A. (minor subject)
- Electrical Engineering and Information Technology B.A. (minor subject)
- Electrical Engineering and Information Technology B.Sc.
- Engineering Cybernetics B.Sc.
- Environmental Engineering B.Sc.
- Geodesy and Geoinformatics Engineering B.Sc.
- Informatics B.Sc.
- Information Systems B.Sc.
- Mechanical Engineering B.Sc.
- Mechanical Engineering B.A. (minor subject)
- Mechatronics B.Sc.
- Medical Engineering B.Sc.
- Natural Language Processing B.Sc.
- Process Engineering B.Sc.
- Real Estate Engineering and Management B.Sc.
- Renewable Energy Engineering B.Sc.
- Simulation Technology B.Sc.
- Software Engineering B.Sc.
- Technical Education B.Sc.
- Technology Management B.Sc.
- Transport Engineering B.Sc.

Natural Sciences and Mathematics
- Chemistry B.A. (minor subject)
- Chemistry B.Sc.
- Food Chemistry B.Sc.
- Materials Science B.Sc.
- Mathematics B.A. (minor subject)
- Mathematics B.Sc.
- Physics B.A. (minor subject)
- Physics B.Sc.
- Technical Biology B.Sc.

Languages and Cultural Science
- Art History B.A. (major subject,
- English B.A. (major subject, mino
- German B.A. (major subject, mino
- History B.A. (major subject, minor
- History of Natural Sciences and Tec
- Linguistics B.A. (single subject)
- Linguistics B.A. (major subject, mino
- Natural Language Processing B.Sc.
- Philosophy B.A. (single subject)
- Philosophy B.A. (minor subject)
- Romance Studies B.A. (single subject)
- Romance Studies B.A. (major subject, minor s

Business and Social Sciences
- Business Administration, technically oriented B.Sc.
- Business Administration B.A. (minor subject)
- Economics B.A. (minor subject)
- Political Sciences B.A. (minor subject)
- Social Sciences B.A. – German-French
- Social Sciences B.A. (single subject)
- Sociology B.A. (minor subject)
- Sport Science B.A. (single subject)
- Sport Science B.A. (minor subject)
- Technical Education B.Sc.
- Vocational Education/Technical Education B.A. (major subject, minor subject)

S E M

The Stuttgart Evaluation Model

Master's Programs

Engineering Sciences
- Air Quality Control, Solid Waste and Waste Water Process Engineering (WASTE) M.Sc. – in English
- Architecture and Urban Planning M.Sc.
- Automotive and Engine Technology M.Sc
- Civil Engineering M.Sc.
- Computational Linguistics M.Sc. – mainly in English
- Aerospace Engineering M.Sc.
- Computational Mechanics of Materials and Structures (COMMAS) M.Sc. – in English
- Computer Science M.Sc. – mainly in English
- Electromobility M.Sc.
- Electrical Engineering and Information Technology M.Sc.
- Energy Engineering M.Sc.
- Engineering Cybernetics M.Sc.
- Environmental Engineering M.Sc. t
- Geodesy and Geoinformatics Engineering M.Sc.
- Geomatics Engineering (GEOENGINE) M.Sc. – in English
- Informatics M.Sc.
- Information Technology (INFOTECH) M.Sc. – in English
- Infrastructure Planning M.Sc. – in English
- Integrated Urbanism and Sustainable Design M.Sc. – in English
- Integrative Technologies and Architectural Design Research (ITECH) M.Sc. – in English
- Mechanical Engineering M.Sc. Georgia Tech. – in English (planned for WS 14/15)
- Mechanical Engineering / Micro, Precision and Optical Engineering M.Sc.
- Mechanical Engineering / Product Development and Engineering Design M.Sc.
- Mechanical Engineering / Materials and Production Engineering M.Sc.
- Mechanical Engineering M.Sc.
- Mechatronics M.Sc.
- Medical Engineering M.Sc.
- Photonic Engineering M.Sc.
- Public Planning and Participation M.Sc.
- Process Engineering M.Sc.
- Real Estate Engineering and Management M.Sc.
- Simulation Technology M.Sc.
- Software Engineering M.Sc.
- Sustainable Electrical Power Supply M.Sc.
- Technical Education M.Sc.
- Technology Management M.Sc.
- Water Resources Engineering and Management (WAREM) M.Sc. – in English

Natural Sciences and Mathematics
- Chemistry M.Sc.
- Materials Science M.Sc. – mainly in English
- Mathematics M.Sc.
- PHYSICS M.Sc. – in English
- Physics M.Sc.
- Technical Biology M.Sc.

Languages and Cultural Sciences
- Art History M.A.
- Computational Linguistics M.Sc. – mai
- Cultures of Knowledge M.A.
- English M.A.
- German Literature M.A.
- History – Sources and Interpretatic
- Philosophy M.A.
- Practically Oriented Philosophy of
- Romance Studies M.A.
- Theoretical and Comparative Ling

Business and Social Sciences
- Business Administration, technic
- Empirical Social and Political Anal
- Empirical Social and Political Anal
- Exercise Science: Health Promotic
- Information Systems M.Sc.
- Public Planning and Participation M.
- Technical Education M.Sc.

S E M

The Stuttgart Evaluation Model

University of Stuttgart
Stabsstelle Qualitätsentwicklung

	Evaluation group 1 Faculties 1,2,6,9,10	Evaluation group 2 Faculties 3,4,5,7,8
	…	…
Winter	Self-evaluation report	Module evaluation
Summer	**Program Review**	Module evaluation
Winter	Module Evaluation	Self-evaluation report
Summer	Module Evaluation	**Program Review**
Winter	Self-evaluation report	Module Evaluation
Summer	**Program Review**	Module Evaluation
	…	…

S E M

The Stuttgart Evaluation Model