

Materials Chain
Kick-Off

9. November 2015

Detlef Müller-Böling
Presentation at the end of the day: Next Steps

Dear Colleagues,

I am a retired Professor of Business Administration. During my academic life I served as rector of the University of Dortmund and as director of the Center for Higher Education Development (CHE). I have been reactivated now to serve as coordinator for Materials Chain.

I guess, I am the only one here without a background in engineering, natural sciences or mathematics. That means without any knowledge of materials chain.

When the rectors of the three universities asked me to moderate a process of establishing a new key program for the Universitätsallianz Ruhr, I said “Yes, I agree” spontaneously.

- I said yes, because this region is part of my heart and I deeply believe, that universities and other research institutions are the cultural and economic drivers of this region still now and more and more in the future.
- I said yes, because in the past I supported some huge interdisciplinary projects with a lot of researchers.
- I said yes, because I experienced the value of an independent promotor in complex processes and interests at all levels from research groups up to rectors.

But the most important reason was: I strongly believe, science has the duty to serve the society. But mostly all problems, we are facing, cannot be solved by a single researcher. What we need are groups of interdisciplinary working women and men. That means in science a turn away from solely chair-based research to research that overcomes chair-, departmental and also university-borders. That is not an easy way. We all are socialized in the Humboldt-mission of Einsamkeit und Freiheit - solitariness und freedom. But this does not fit the necessities of the 21th century. That is we have to learn working together with people who have different knowledge, different perspectives, use different methods and speak different languages.

I know, engineers and scientists are on that way since round about 100 years. But nevertheless it is a huge challenge.

To support this extraordinary pathway is my real reason to participate in Materials Chain.

Collaborative work of scientists independently of different knowledge, methods or languages is always faced by another basic dilemma: the freedom of an individual scientist has to be restricted. Restricted by what and mostly more important by whom? Often we discuss this dilemma under the terms bottom-up or top-to-down or centralism - decentralism. This dilemma cannot be solved generally.

What we need in science are autonomous researchers and teachers with creativity, with individualism, that are more cranks than followers. But in every department, in every university, in every Sonderforschungsbereich we also need a common aim.

The principles in my opinion for such associations of scientists to solve the dilemma are therefore:

Decentralism in responsibility with a common mission and rules for decision making.

That means, everybody is an independent part of the system, but following a common vision or accepted aims.

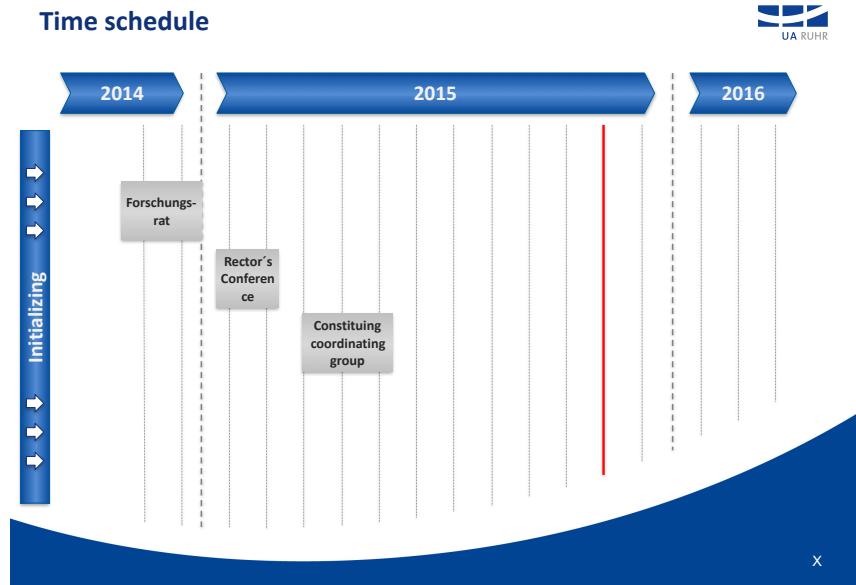
Decision making in science is not a process of majorities. Professor Einhäupl, former chairman of the Wissenschaftsrat und now chairman of Charité Berlin stated recently: “Everybody should have the chance to be part of the decision making *process*, but decision *making* in science is not a question of the majority, that is the duty of central bodies.”

We can also express it in terms of a president of an American university, who said: “A university must be more than an accumulation of users of the central heating.”

What we need in a project like Materials Chain on the one hand is a vision, a vision what Materials Chain could be and how it could serve the academic as well as the rest of the world, that is the society.

What we need in our project on the other hand is a balance between centralism and decentralism. This balance is not fixed over time. It is possible and useful to have more centralism at one time and more decentralism at another time.

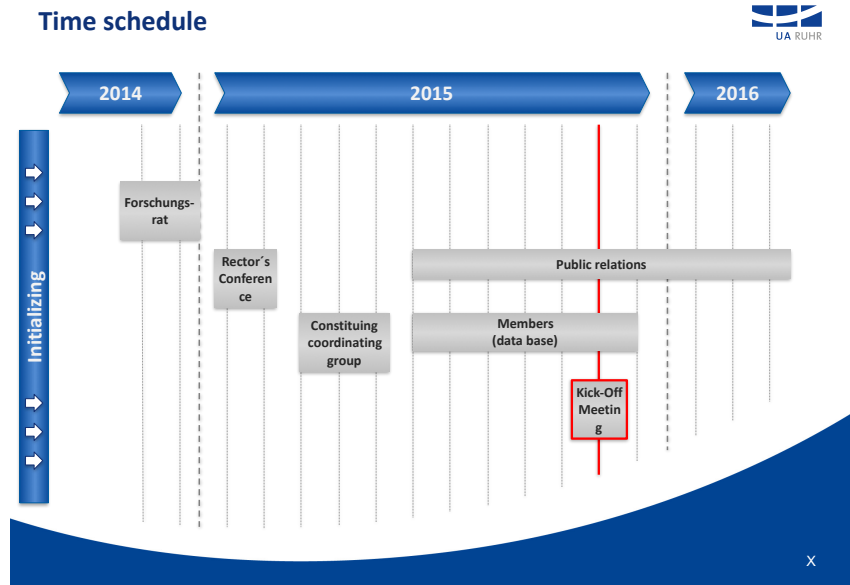
Before outlining the next steps I will sum up, what happened till now.



The first step was the decision of the Forschungsrat to propose Materials Chain as the first key program in research and education of the Universitätsallianz Ruhr. The Forschungsrat is the scientific advisory board, consisting of 30 excellent researchers of the three universities. The Rector's Conference of the Universitätsallianz followed this decision and charged a coordinating group to prepare the key program.



This group consists of the three Vice-rectors, three scientific coordinators with staff and three Universitäts Allianz Ruhr – coordinators like me. If you want to call it “to much overhead”, it is not totally wrong, but keep in mind please, all these members are working part-time in Materials Chain.



This coordinating group asked all appropriate scientists in the three universities as well as Max-Planck-, Fraunhofer- and Leibniz-Institutes and cooperating Fachhochschulen, whether they are able and willing to participate. This work is not finished yet and so the data base, we built up, is work in progress. But the reactions are impressive. Till today this data base consists of more than 200 research groups, more than 5000 publications during the last 5 years and about 50 collaborative research projects on different areas of Materials Chain with a lot of different methods, materials and properties.

Meanwhile we started public-relations-work in regional newspapers as well as in internal information services to inform politics, business, the regional population and members of our institutions.

And today we came together to get to know each other and to begin structuring the content of Materials Chain. This can't be done in one day, but it is a first step and this step has been very successful in my opinion.

So after a period of top-down work by the coordinating group we now started to decentralize our work having in mind the balance between centralism and decentralism.



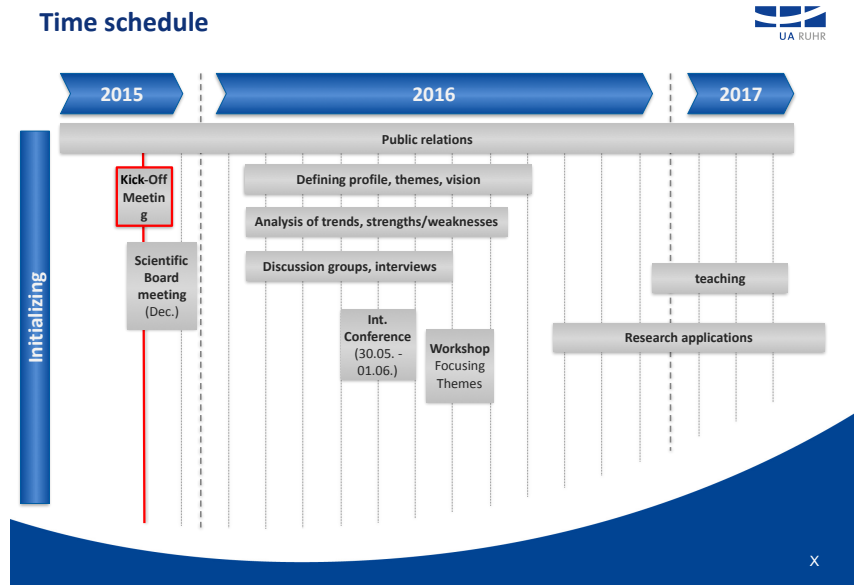
Coming now to the future. The research field was subdivided into five Research Areas for example in the questionnaire you answered and also in the poster session. But these areas are not selective. Many discussions today stressed that point. May be it is necessary to subdivide it in less areas, may be 3 or 4.

After this Kick-off-workshop we want to establish a scientific board. The colleagues who agreed to participate can be seen here. It is a very good sign that these excellent researchers are involved in Materials Chain outstandingly. Also this is not a closed shop, but can be opened to other colleagues.

This board should together with the coordinating group flesh out

1. based on your answers in the data base and
2. on the results of this kick-off-workshop and
3. on the facilities of the participating institutions and
4. at least based on group discussions and interviews in the future

this board should flesh out themes and visions, which are worth to be worked on in Materials Chain.



Coming back to the time schedule. We hope, we can organize a first board meeting this year before Christmas. This could be a Christmas gift.

We assume it will be necessary to organize group discussions with you in different compounds and have interviews with you or some of you to get to know your point of views, your expertise and your knowledge.

Furthermore we want to analyze trends and our position in the world to see, what our strengths and weaknesses are.

For that reason an international conference in the end of May (May 30 – June 1) with experts from all over the world will be organized.

Afterwards we will organize a next workshop with all members of Materials Chain, to finalize the topics we will focus on.

The aim of the forthcoming period is to define profiles, themes or a vision, what Materials Chain will be.

And for that Materials Chain needs the input of all of you:

There is the opportunity for everybody to make proposals, give hints or ask questions. We know it is a huge field with different aspects, perspectives

and insight views. Everything will help Materials Chain to become better. Feel free to contact us in any way you prefer, by phone, by mail or directly, today or whenever.

The reaction to this first Kick-Off-Workshop with more than 170 participants gives hope for a very good development in the future.

A word to our colleagues of the Fachhochschulen: We have a delay in communicating with you. I am very happy that some of you are here with us. When we will become a region of materials science, you are part of this without any doubt. Researchers in research-institutes, universities and universities of applied sciences as well as in enterprises have different focuses on research. None of these focuses is a better or a worse one. We need them all if we want to make a real contribution to society.

Today it is not the starting point of collaborative work for most of you, but it can be the starting point for a key subject the Ruhr region is well known for in 10 years in the academic as well as the business world. That's our aim.

I started with the item, "I am the one without any knowledge of Materials science", I will finish with the sentence: It's now yours.

You are the ones with expertise in the field of materials science and technology.

You are the experts with the ability to build up a vision, a mission for materials chain in mobility, health, in renewable energy or whatever.

Thank you for your attention.