

Inhaltsverzeichnis

Table of Content

Dank der Herausgeber
Acknowledgments of the Editors
Ralf Reichwald, Magnus Fröhling, Birgit Herbst-Gaebel, Michael Molls, Peter Wilderer

Grußwort
Greeting
Thomas F. Hofmann, President, TUM

Nachhaltigkeit – Circular Economy als politisches Programm
Sustainability – Circular Economy as a Political Program
Florian Herrmann, MdL, Bavarian Minister of State for Federal Affairs and Media

Nachhaltigkeit als strategisches Ziel der Technischen Universität München
Sustainability as a Strategic Goal of Technical University of Munich
Gerhard Kramer, Senior Vice President Research & Innovation, TUM

Zirkularität als Prinzip
Circularity as a Principle
Michael Molls, Speaker Senior Excellence Faculty, TUM

Symposium Circular Economy

Symposium Kreislaufwirtschaft	21
Symposium Circular Economy	
Einleitung	23
Introduction	
Ralf Reichwald, Peter Wilderer	
Das Online-Symposium „Circular Economy“ im Dahlem-Format	24
The Online-Symposium “Circular Economy” in Dahlem-Format	24

Part I

Handlungsempfehlungen des Symposiums	29
Recommendations for Action of the Symposium	
Magnus Fröhling	
I.1. Grundlegendes Verständnis der Kreislaufwirtschaft	30
I.1. Basic Understanding of Circular Economy	31
I.2. Handlungsempfehlungen des Symposiums	34
I.2. Recommendations for Action of the Symposium	35
I.3. Erläuterungen	36
I.3. Explanations	37
I.4. References	43

Part II

Recommendations for Action by the four Working Groups	45
II.1. Sustainability requires Circular Economy	47
Peter Wilderer, Manuela Wimmer	
II.1.1. Recommendations for Action – Working Group I	48
II.1.2. Explanations	50
II.1.3. References	59
II.2. Circular Economy and Sustainable Energy	61
Georg Färber, Thomas Hamacher, Winfried Petry	
II.2.1. Recommendations for Action – Working Group II	62
II.2.2. Explanations	64
II.2.3. References	75
II.3. Economic Theory and Practice	77
Magnus Fröhling, Erik G. Hansen, Ralf Reichwald	
II.3.1. Recommendations for Action – Working Group III	78
II.3.2. Explanations	80
II.3.3. References	89
II.4. Circular Economy through Digitalization	93
Klaus Mainzer, Sicco Lehmann-Brauns	
II.4.1. Recommendations for Action – Working Group IV	94
II.4.2. Explanations	96

Part III

Student Internship Circular Economy	103
Thomas Hamacher, Ralf Reichwald	
An International Project Laboratory on Circular Economy	104

Part IV

Circular Economy in Research and Education at TUM	107
IV.1. CirculaTUM	109
IV.1.1. CirculaTUM – Speakers and Members	110
IV.1.2. CirculaTUM – the TUM Alliance for Circular Economy in Research, Education and Transfer	112
IV.2. TUM Campus Straubing for Biotechnology and Sustainability	115
IV.2.1. TUM Campus Straubing – Board and Members	116
IV.2.2. Education and Research for the Bioeconomy – How to go across disciplines	118

Part V

TUM Forum Sustainability	121
Birgit Herbst-Gaebel, Michael Molls	
TUM Forum Sustainability – an Initiative of TUM Senior Excellence Faculty	122