



INSTITUTE OF
PEOPLE DEVELOPMENT

Re-inventing the

Human Resources Function

for the Fourth Industrial Revolution

- An Institute of People Development Initiative -

The world is changing rapidly and radically. Broadly represented as the "Fourth Industrial Revolution" (4IR), the systemic changes emanate from a confluence between technological developments, environmental and social changes. 4IR is impacting societies, industries, workplaces and skills the world over.

Ministerial Cabinets and economic forum task teams around the world are working on responses. 4IR affects different industries very differently. A few industries already have emergent and/or formalised responses in place; but most do not.

Beyond technological change, this is about how people and organisations invent and use technology. 4IR represents a "multi-level socio-technical transition". "Multi-level" refers to the need to coordinate things such as regulatory frameworks and industrial strategies with industry- or company-level responses. "Socio-technical" relates to the human/technology interface.

Globally, the HR implications are featured mostly in high-level workforce analyses – which jobs will be affected and how. In South Africa for example, most industries or companies have not yet even done this work; don't know how to; or are groping toward solutions in isolation. The Institute of People Development aims to flip the above dynamics creatively and constructively.

"The scale, scope and complexity of how technological revolutions influence our behaviour and way of living will be unlike anything humankind has experienced".

-Klaus Schwab, Founder and Executive Chairman of the World Economic Forum



4HR Masterclass Series

The 4HR Masterclass equips you to:

- Understand the emerging technologies
- Learn about the impact technologies are having on work and workplaces, across industry sectors
- Dialogue with up to 10 leading local & international experts in 4IR
- Think through the implications for HR Management and Development
- Become a change champion, organisational capability builder and technology proponent within your organisation

You will be required to:

- Read the latest research (provided), analyse your own organisation and prepare points of discussion
- Listen to, then engage with key global and national thinkers
- Prepare and implement your own analysis and recommendations within your organisation
- Think through the implications for HR Management and Development
- Provide a case study of emerging "best practice" and contribute toward a national recognition award!



"If you have a piece of string tied to a brick, you can't push it – but you can pull it". The awards component aims to incentivise Heads of Strategy and HR executives to participate in a dialogue with one another and with relevant state, corporate and professional agencies.

The IPD Continuous Professional Development (CPD) program will support award entrants through accessing core components of the 4HR Masterclass Series from leading local and international experts on a range of relevant topics. This series of participatory educational programs will equip HRD Professionals to develop, test and share successful workplace application innovations, as a basis for the awards.

Informing both components above is a development principle that "it is better to do things with people than to them or for them". The 4HR Masterclass, HR Innovation Awards and the CPD program will establish a "community of practice"; involve the HR function in conducting baseline research to inform evidence-based strategy and policy, share best practices and engage role-players at different levels of the system around the multi-level socio-technical transitions.

The programme below is subject to change as needs evolve.



LOG ON TO REGISTER

For the 3-day 4HR Masterclass at:
www.peopledevelopment.co.za/4hr
and follow the registration link!

Day One - 4IR as a Socio-Technical Transition

Framing the Challenge: Technology for Development in 4IR 08h30

Professor Thomas Thurner, Research Chair in Innovation and Society at the Cape Peninsula University of Technology in South Africa and Professor of the National Research University Higher School of Economics in Moscow, Russia
Using 4IR Technology for the Greater Good

Prof. Nleshia Pillay, Head of the Computer Science Department of the University of Pretoria, South Africa
Artificial Intelligence for Africa: An Opportunity for Growth, Development, and Democratisation

Prof Martin Hilbert, University of California Davis, Department of Communications
Big Data: A Review of Promises and Challenges for Development

10h30

Technology Trends in 4IR

10h45

Ingrid Paoletti, Politecnico di Milano, Italy
3D printing and Additive Manufacturing

Grace X. Gu, Department of Mechanical Engineering, Berkely US
Developments in 4D-printing: a review of current smart materials, technologies, and applications

Laith Farhan, Manchester Metropolitan University
The Internet of Things – Problems, Challenges and Opportunities

Mahentesh N. Birje, Center for Post-Graduate Studies, VTU India
A Review of Cloud Computing: Concepts, Technology, Challenges & Security

Olimpiya Saha, Computer Science Department, University of Nebraska Omaha
A Comprehensive Survey of Recent Trends in Cloud Robotics Architectures and Applications

12h45

Organisational changes and Labour Market Trends and Issues in 4IR Dr Surendra Thakur, Ministerial Task Team for 4IR
The work of the SA Ministerial Task Team on 4IR

13h30

Till Alexander Leopold, Centre for the New Economy and Society
Which Jobs Will Decline, Grow, Change – and how do we know?

João Silveira The Hague Centre for Strategic Studies (HCSS)
Employment, Inequality and Productivity – Technology and the European Labour Market

15h00

4IR – no one size fits all model?

15h15

Thorsten Wuest, University of Virginia
Smart Manufacturing & Industry 4.0 Maturity Models: Implications for Small and Medium-sized Enterprises (SMEs)

Professor Andre Kraak, Centre for Relevant Education and Learning, Wits University
Innovation in industrial value chains

Mr Daryl McLean, Project Leader, Institute of People Development, South Africa
Backcasting from technology changes to value chains

CLOSE 17h00

Day Two - 4IR in Context: Industry Case Studies

Case Studies 1: 4IR in Agriculture 08h30

Professor Dr Cornelia Welzien, Leibniz Institute for Agricultural Engineering and Bioeconomy
Digital Agriculture

Dr Ilaria Zambon, Department of Agricultural and Forestry Sciences (DAFNE), Tuscia University
Agriculture in Digital Development for SMEs

Case Studies 2: 4IR in Mining
Marina Rynikova Russia
Intelligent Mining Systems

Sietsie van der Woude, Head of Modernisation and Safety (Minerals Council SA)
The Modernisation and Safety of Mining

Navin Singh, Council for Scientific and Industrial Research (CSIR), South Africa
Weathering the Perfect Storm in Mining

10h30

Case Studies 3: 4IR in Manufacturing
Virgilio Cruz-Machado, New University of Lisbon, Portugal
Emerging Technologies in the Manufacturing Industry

10h45

Dr Philip Merkefor, Manufacturing Research, Deloitte's
Vertical networking, horizontal integration, through-engineering and exponential technologies in manufacturing

Case Studies 4: 4IR in Financial Services
R. Jesse McWaters, World Economic Forum
The Future of Financial Services - How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed

Dr Ellen Ohene-Afoakwa - Bankseta
The future of the finance industry in Africa

12h45

Case Study 5: Service Industries
Alexandra Ermolaeva, University of Economics, Prague
Logistics and supply chain management under 4IR

13h30

Belem Barbosa, University of Aveiro, Portugal
The Shifting Role of Marketing during 4IR

Annette Hillebrand, WIK
Technology and Changes in Postal Services

15h00

Case Study 6: e-Government
Adegboyega Ojo, Center for Electronic Governance, United Nations University
Building a Sustainable Collaborative Technology Environment in Government

15h15

Tendani Mawela, Department of Informatics, University of Pretoria, South Africa
E-Government Implementation: A Reflection on South African Municipalities

Professor Fran Greyling, National School of Government South Africa
Technology Enhanced Learning for Building a Skilled and Capable State

CLOSE 17h00

Day Three - 4HR - Human Resources in 4IR

Transforming HR technologies 08h30

Professor Emma Parry, Cranfield University UK
The impact of emerging technologies on work: a review of the evidence and implications for the human resource function

Richard Johnson University of Albany, USA
Transforming HR through Technology – HR Information Systems

Michelle R. Mey School of Industrial Psychology and Human Resources, Nelson Mandela Metropolitan University, South Africa
Electronic human resource management

Chantal Fourie, The Learning Refinery South Africa
The Role of Technology in Human Resource Development

10h30

Transforming HR Functions

10h45

Celina So ek-Borowska, Warsaw School of Economics, Poland
Recruitment under 4IR

Andreas Hirschi, University of Bern, Switzerland
Career planning under 4IR

Osman Bayraktar, University of Istanbul
The Effects of 4IR on Human Resources Management

Maura Sheehan, National University of Ireland
Innovation and Human Resource Development.

Peter Capelli
Technologies for Human Resource Management and Appraisal

12h45

Transforming HR skills

13h30

Dave Ulrich, University of Michigan
HR talent and the new HR competencies

Professor Dianne Stone, University of Alabama USA
The Impact of Technology on HR – An Evidence-Based Assessment

15h00

Plenary

15h15

Establishing a South African Community of Practice to Take Forward 4HR dialogues

CLOSE 17h00