

Supporting
European
Aviation



Learning from All Operations

Understanding the reality of work-as-done

Steven Shorrock

EUROCONTROL Network Manager

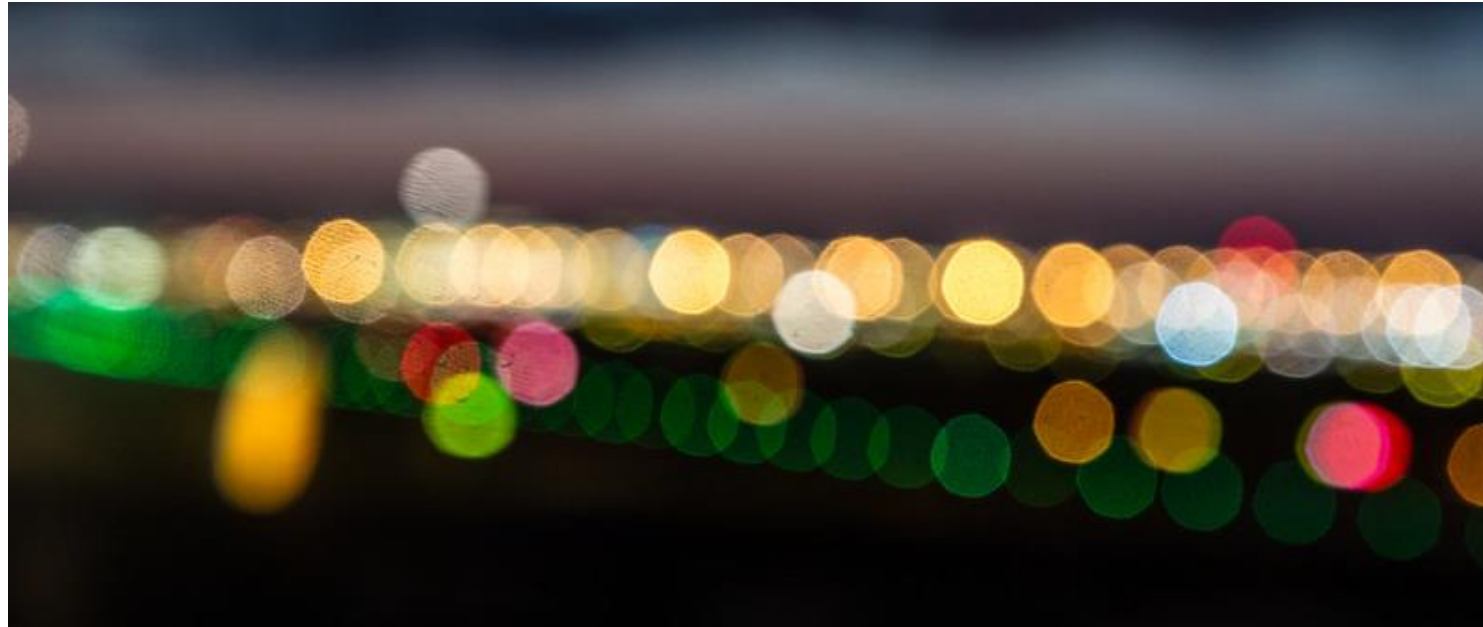
Senior Expert Safety & Human Factors

European Union Agency for Railways | European Rail Safety Days 2021 | Porto | 2-5 November



Hopes for this session

1. Provide some accessible and applicable ideas about work
2. Help to inspire curiosity and learning



Supporting
European
Aviation



‘All Operations’



Why learn from all operations?

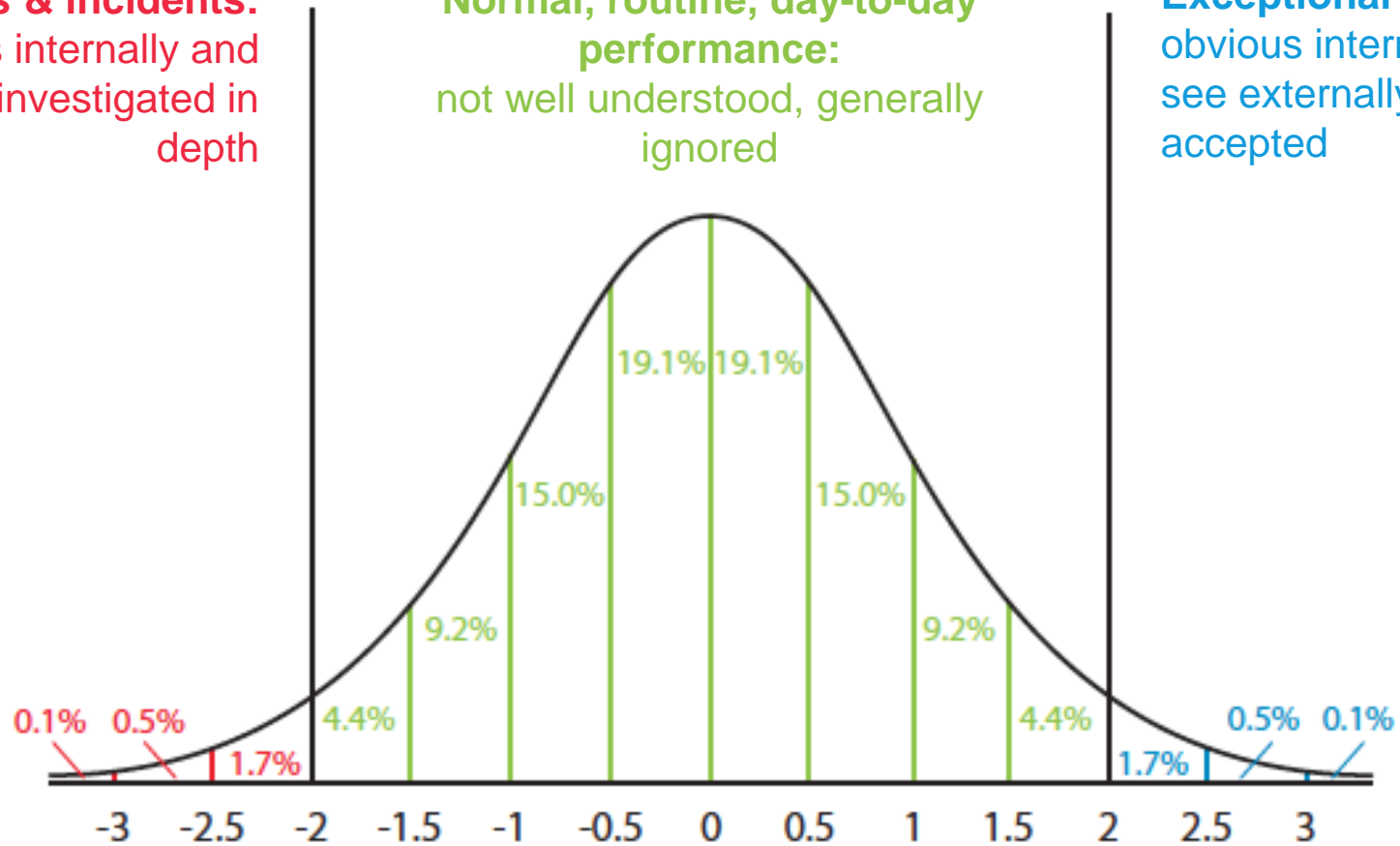
1. It helps to improve all aspects of performance and wellbeing
2. It does not require unwanted events
3. It helps to see and build on what's strong
4. It helps to see slow changes
5. It can involve everyone

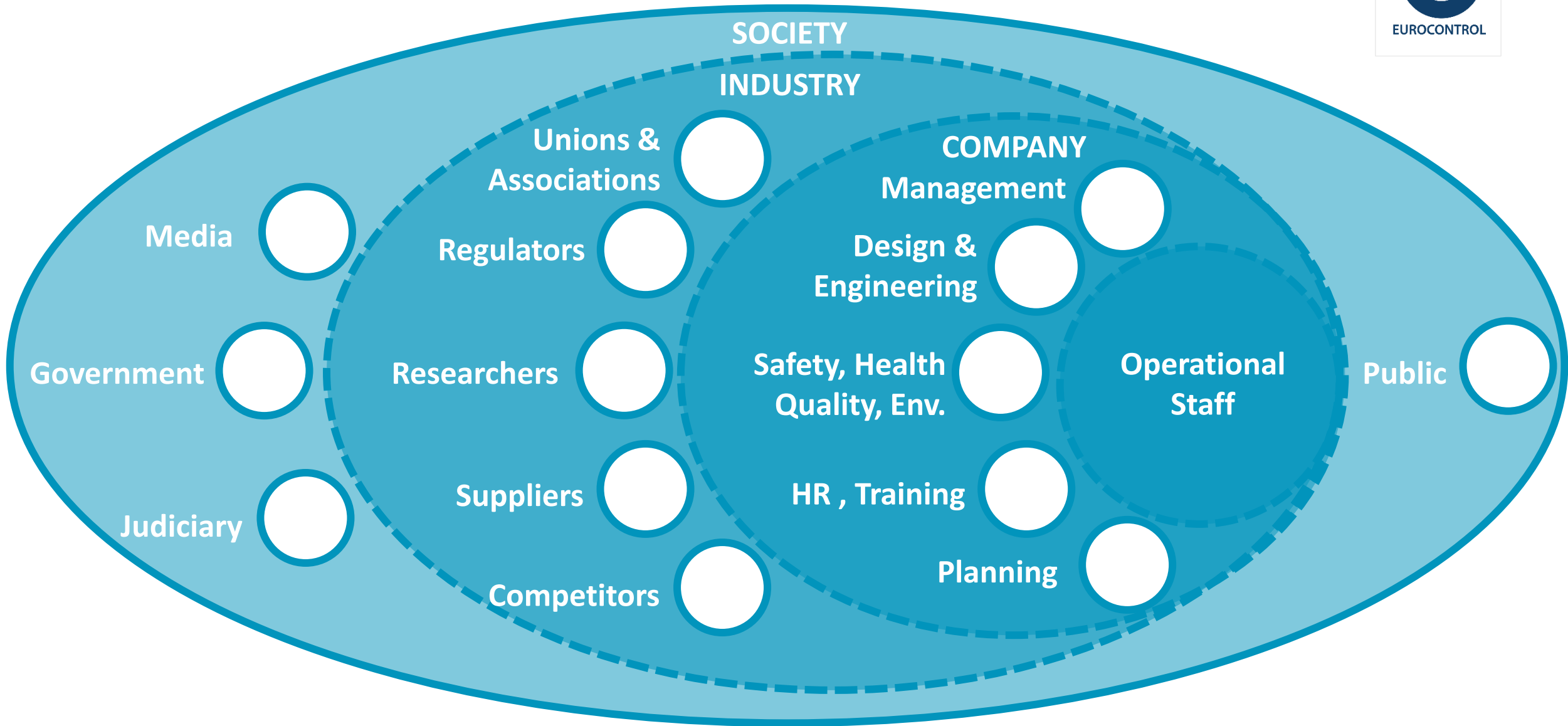


Accidents & incidents:
obvious internally and externally, investigated in depth

Normal, routine, day-to-day performance:
not well understood, generally ignored

Exceptional performance:
obvious internally, hard to see externally, gratefully accepted





Supporting
European
Aviation

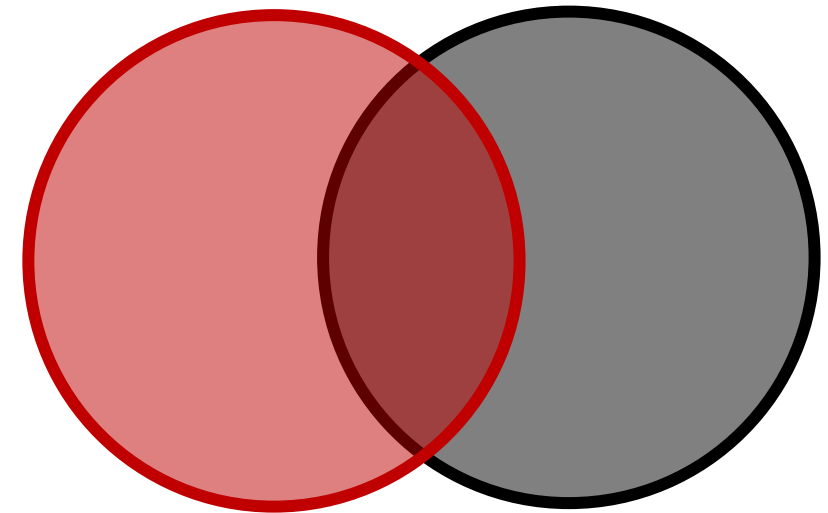


The Realities of Work-as-Done



1. Real work is rarely as we imagine it to be

- Imagination of others' work is always inaccurate and incomplete
- Work-as-imagined becomes part of the work environment
- Closing the gap requires constant dialogue between interfaces



Work-as-Imagined

Work-as-Done

What is it about your work that others would find surprising (and that might be relevant to their work)?

2. People make trade-offs, compromises and adjustments to get the work done

- These are necessary for systems to work
- They occur at all levels...and interact and combine in unexpected ways
- They require expertise and communication



Work-as-Done

3. People do things that make sense to them at the time, given the context

- Our intentions and decision making are ‘rational’ given our situation (‘local rationality’)
- With hindsight and knowledge of outcomes, others’ decisions can seem ‘irrational’
- Try to understand why a decision or plan made sense to the person at the time



Work-as-Done

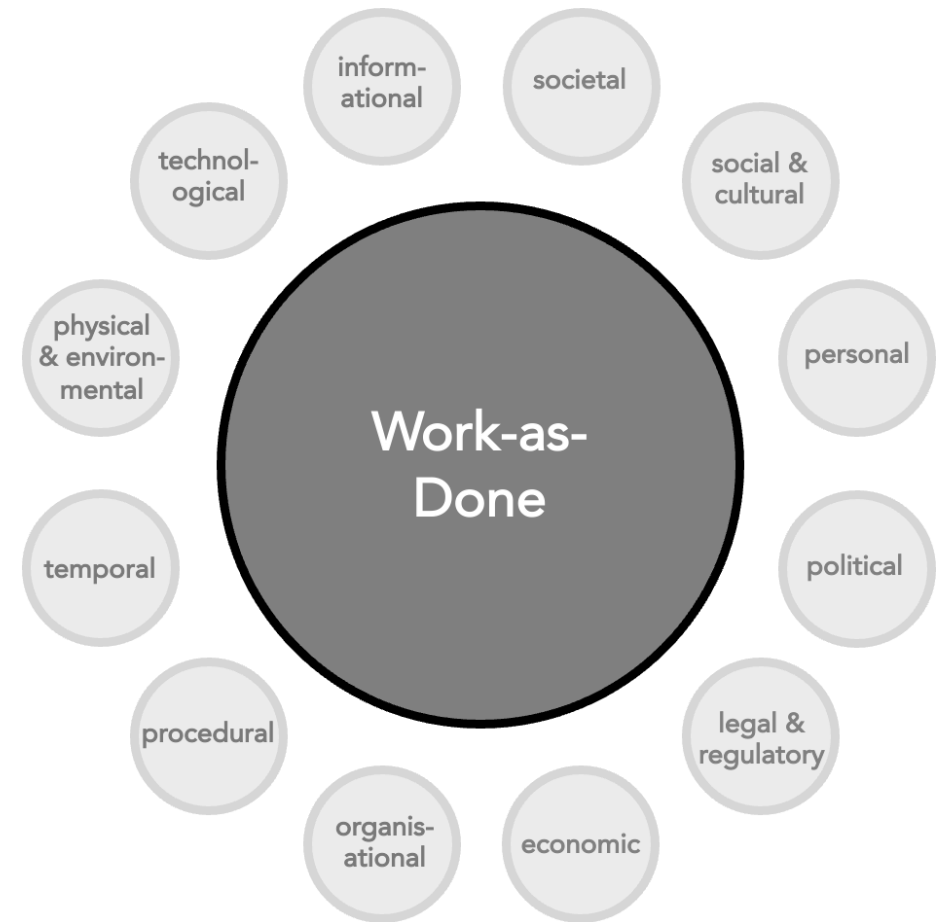
4. People have unique strengths, but also limitations

- Humans have abilities that no other part of any system has
- Every individual has unique contributions to bring to work
- People also have limitations (and even Olympic athletes perform below their average half of the time!)



5. Work is influenced by multiple interacting contexts

- All outcomes are influenced by the multiple contexts of work
- Some are available to the senses, but others are not
- When something goes wrong, much of the context isn't available for 'replay'



Supporting
European
Aviation

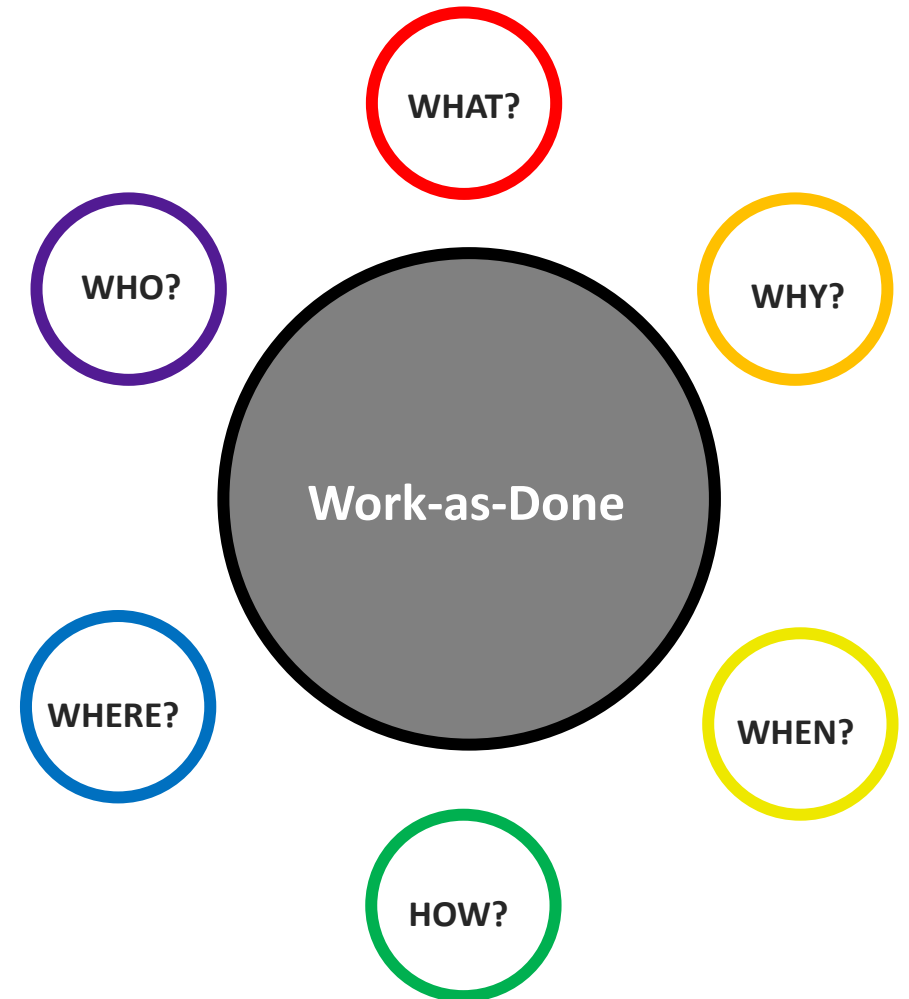


Understanding the Reality of Work



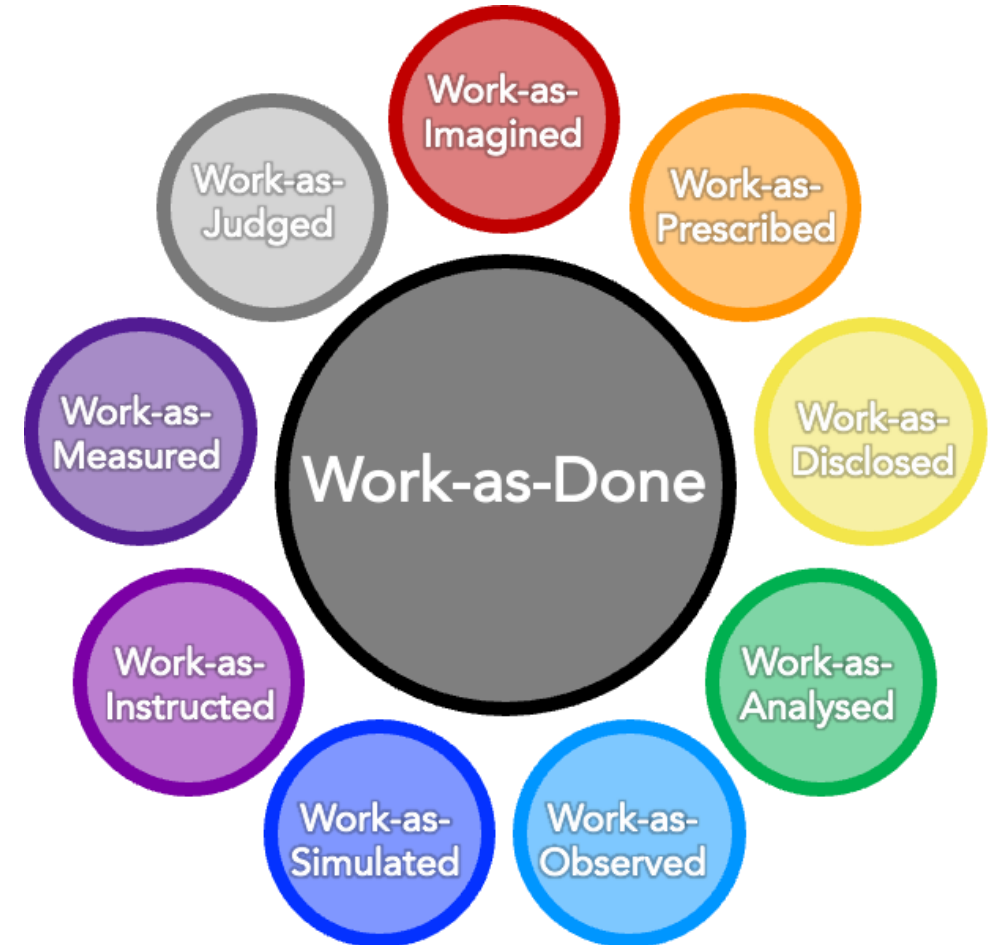
1. Be curious about others' work

- People are the experts in their own work
- We often have most to learn from those we interact with least
- Find out what is working well, and what makes' work more difficult than it needs to be



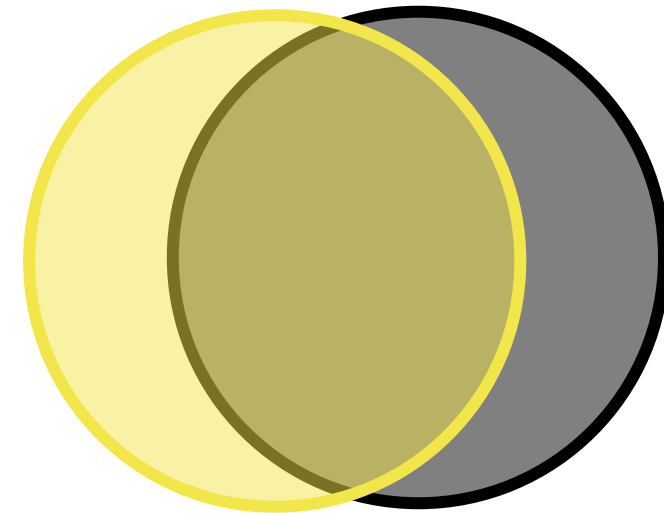
2. Keep in mind what kind of work you're thinking about

- Work-as-done is the real thing...and can never be fully understood
- All others are 'proxies' for the real thing
- But combining these 'proxies' can help you to approach an understanding of work-as-done



3. Assume goodwill and make it easy for people to say what's on their minds

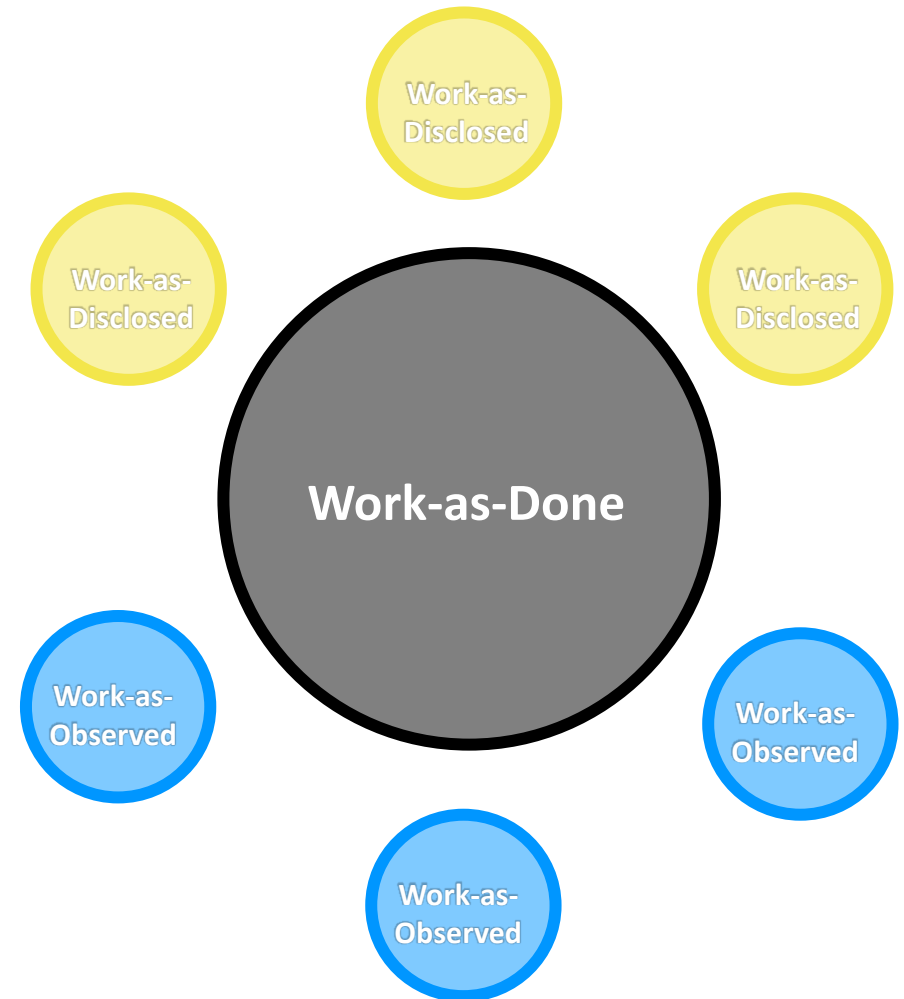
- Nobody goes to work to have a bad day
- Fear of consequences drives almost all non-disclosure
- Create relationships and an environment where people feel safe to be open and honest



Work-as-Disclosed Work-as-Done

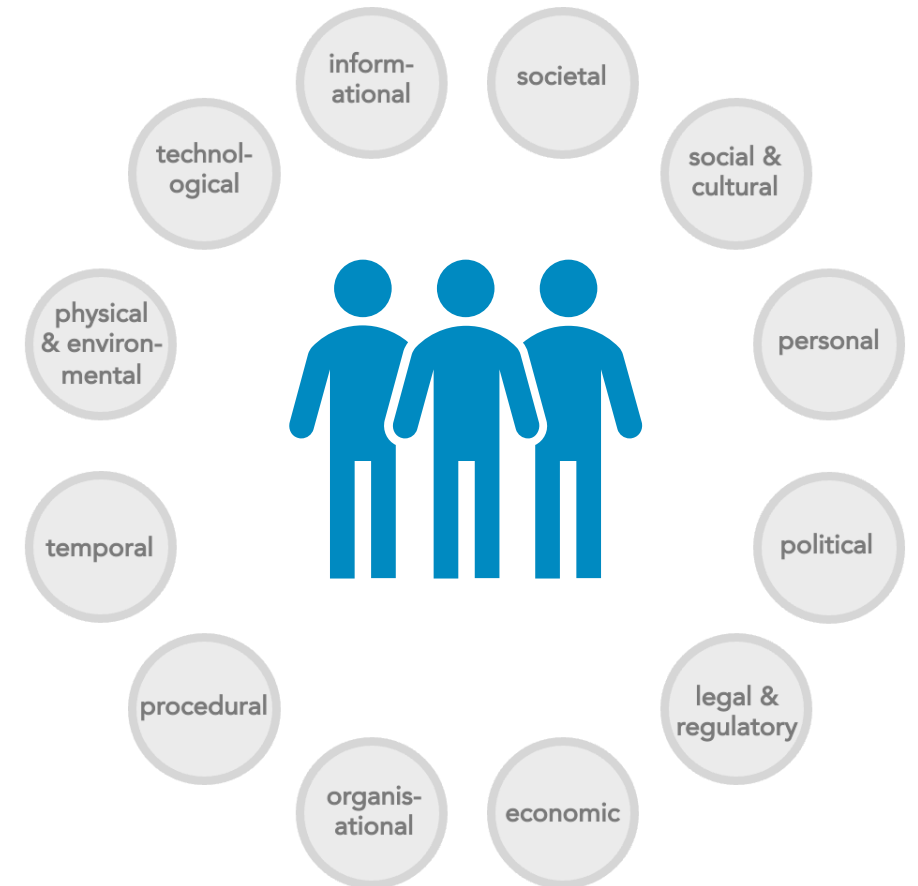
4. Get multiple perspectives

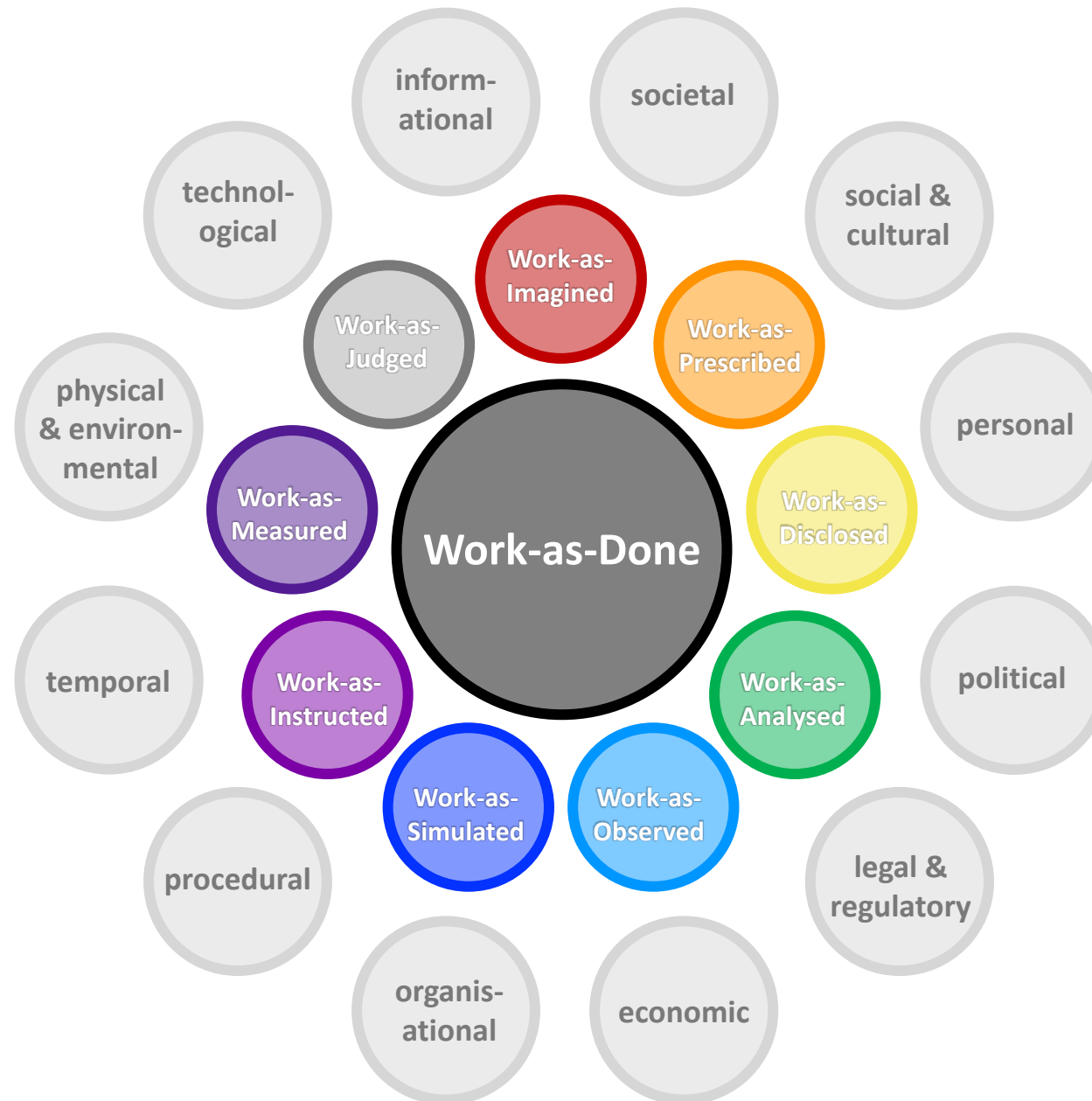
- Different people have different insights into work
- Different people see different problems and different influences on these
- Different people see different solutions



5. Consider the multiple influences on performance

- All performance has multiple influences
- Influences on performance can be internal and external, local and distant, acute and latent, visible and invisible
- You can't change the human condition but you can change the conditions of human work





HindSight25

WORK-AS-IMAGINED & WORK-AS-DONE

MALICIOUS COMPLIANCE
by Sidney Dekker

CAN WE EVER IMAGINE HOW WORK IS DONE?
by Erik Hollnagel

SAFETY IS IN THE EYE OF THE BEHOLDER
by Florence-Marie Jegoux, Ludovic Miesset and Sébastien Follet

I WOULDN'T HAVE DONE WHAT THEY DID
by Martin Bromiley

HindSight26

SAFETY AT THE INTERFACES: COLLABORATION AT WORK

THE VOICE OF AN ANGEL
by Sidney Dekker

FROM EXPERIENCE REPORTS TO EXPERIENCE SHARING
by Erick Measas, Florence-Marie Jegoux and Sébastien Follet

COLLABORATIVE ADAPTATION IN A CONSTRAINED SYSTEM
by Don Styles and Chris Beaman

HOW FIERCE COMPETITORS JOINED FORCES TO MAKE OFFSHORE HELICOPTER OPERATIONS SAFER
by Gretchen Hawkins

Plus much more on collaboration within and between organisations

HindSight27

COMPETENCY AND EXPERTISE

THE DARK SIDE
by Rhona Fin

COMPETENCE LAGGING OR LEADING?
by Erik Hollnagel

THE GOOD, THE BAD AND THE UGLY
by Ashley Learyson

LEARNING FROM SPORT PSYCHOLOGY: A CONVERSATION WITH LEE CROMBIEHOLME
Plus much more on competency and expertise for the safety of air traffic management and aviation

HindSight28

CHANGE

CHANGING TO ADAPT AND ADAPTING TO CHANGE

MODE-SWITCHING IN AIR TRAFFIC CONTROL
Zogh Byrnes and Maylis Ruel

CLOSE ENCOUNTERS OF THE LEGAL KIND: A NEED FOR AIRSPACE CHANGE?
Marc Beaupre

THE JUST CULTURE JOURNEY IN EUROPE: LOOKING BACK AND LOOKING FORWARD
Roderick van Dam, Maria Krasimirova and Tony Luce

FOUR MODES OF CHANGE: TO, FOR, WITH, BY
Cornac Rivault

LEARNING FROM PSYCHOTHERAPY AND PSYCHOTHERAPY
Conversation with David Murphy

SKY brary

HindSight29

GOAL CONFLICTS AND TRADE-OFFS

TRADE-OFFS AND TABOOS
Jean Paris

GOOD JOB, EVERYBODY
Emmanuelle Cravatin

INVISIBLE TRADE-OFFS AND VISIBLE CONSEQUENCES
Erik Hollnagel

CONFLICTS WITHIN AND WITHOUT: LEARNING FROM COSTA CONCORDIA
Nippon Anand

QF32
An interview with Captain Richard Champion de Crespigny

Plus much more on goal conflicts and trade-offs in aviation and beyond

HindSight30

WELLBEING

QF32 AND POST-TRAUMATIC STRESS
Steven Shorrock interviews Captain Richard Champion de Crespigny

MORAL REASONS FOR PROMOTING WELLBEING IN ORGANISATIONS
Susanee Shale

SYSTEM WELLBEING
Anders Ellerstrand

THE ENERGY PROJECT @MIJAC
Marivella Leone

BURNOUT IN EMERGENCY MEDICINE: HOW DO WE GET BETTER?
Shannon McNamara

Plus much more on Wellbeing in aviation and beyond

HindSight31

Human and organisational factors in operations

SPECIAL SUPPLEMENT

LEARNING THROUGH COVID-19

LESSONS IN A TIME OF COVID AVIATION AND HEALTHCARE

LEARNING FROM ONLINE TEAM RESOURCE MANAGEMENT
By Emmanuelle Cravatin

WHEN EVERYDAY WORK IS NOT SO EVERYDAY
By Anders Ellerstrand

CAPTAINING THROUGH COVID-19
By Paul Reuter

IMPACT OF THE COVID-19 PANDEMIC ON AVIATION WORKERS AND THE AVIATION SYSTEM
By Paul Cullen

Plus much more on learning through COVID-19

HindSight31

Human and organisational factors in operations

LEARNING FROM EVERYDAY WORK

CONDITIONS FOR LEARNING
By Erik Hollnagel

HOW COMPLEX SYSTEMS FAIL
By Richard I Cook

LEARNING PERFORMANCE VARIABILITY AT SKYGUIDE
By Malena Haldrup & Marianne Bellmann

OBSERVING EVERYDAY WORK: NORMAL OPERATIONS MONITORING AT ENAIRE
By Alberto Rodriguez de la Hita

LEARNING IN THE HEAT OF THE MOMENT: AN INTERVIEW WITH SABRINA COHEN-HATTON
By Steven Shorrock

Plus much more on learning from everyday work in aviation, shipping, healthcare, firefighting, elite sport and beyond.

HindSight32

Human and organisational factors in operations

THE NEW REALITY

NAVIGATING THE NEW REALITY
By Steven Shorrock

MAKING IT EASY FOR PEOPLE TO DO THE RIGHT THING
By James Barber

A GLOBAL AEROMEDICAL PERSPECTIVE ON THE NEW REALITY
AN INTERVIEW WITH ICAO'S ANSA JORGANAW

FATIGUE AND CURRENCY
By Kelly Lee

A SURGEON'S TAKE ON HUMAN AND ORGANISATIONAL FACTORS
A CONVERSATION WITH MANOJ KUMAR

Plus much more on human and organisational factors in aviation, shipping, healthcare, rail, and beyond

I M A G N E

THANK YOU

MAAKE
TERMA KASIH RAIBH MAITH AGAT
MULTUMESC
GRAZIE
MERCIO
MOCHCHAKKERAM
MERCIO
CHOKRANE
MATUR NUWUN

MATONDO
CHOKRANE
UA TSAUG RAU KOJ
DANK JE
RAIBH MAITH AGAT
SPASIBO
MAAKE
OBRIGADO

WELALIN
SPASIBO
SPASIBO

ARIGATO
MOCHCHAKKERAM
OBRIGADO

SPASIBO

JUSPAXAR
OBRIGADO
MATONDO

MOCHCHAKKERAM
KIITOS
SALAMAT
MERCIO
MERCIO
RAIBH MAITH AGAT
OBRIGADO
MOCHCHAKKERAM

ASANTE
UA TSAUG RAU KOJ
MOCHCHAKKERAM

KIITOS
DANKON
NIRRINGRAZZJAK
MOCHCHAKKERAM

MULTUMESC
VINAKA
NIRRINGRAZZJAK
MAMANA

KIA ORA
CHOKRANE
SALAMAT
CAM ON BAN
MERCIO
MERCIO
OBRIGADO
MOCHCHAKKERAM