

MANUFACTURING CONSTANT AND HIGH TECH AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE

www.infosys.com/human-amplificatio



MANUFACTURING AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE

External Document © 2017 Infosys Limited



THE DIGITAL TRANSFORMATION JOURNEY

A majority of enterprises in the Manufacturing and High Tech sector (80%) are undergoing full-cycle digital transformation. 15% are transforming partially or in pockets and 5% are not currently transforming but will do so in the near future. The respondents who say their organizations are transforming indicate that the following Al-supported activities play a significant role in their digital transformation:

Machine learning	79%
Institutionalization of enterprise knowledge using Al	66%
Cognitive AI-led processes and tasks	60%
Automation of decision making	54%
Building AI-based applications to amplify and improve products and services	53%
Robotic automation	46%

According to the respondents, the top three digital transformation goals of their organizations are to become more agile and customer-centric (52%), build a mobile enterprise (51%) and deliver great employee experiences (42%).

"The economics of investing in robotic efficiencies is not lost on manufacturers. An example is Bosch, the German manufacturing company, which hopes to earn one billion dollars in additional revenue, and save one billion in costs by using machine learning for predictive maintenance and self-monitoring. With robots attaining greater degrees of sensitivity in their touch capabilities, they will be able to take over many assembly and movement-dependent activities on the future manufacturing floor. At the same time, improvement in sensor and vision technology is creating smarter, lighter and friendlier co-bots that humans can work with safely. For instance, automobile maker BMW's self-driving Smart Transport Robot travels the floor and sends out communication on any critical situation it sees."

3

MANUFACTURING AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE

TRANSFORMATION PRIORITIES

Over one in three respondents indicate that their organizations' first priority for automation initiatives is to automate processes. This is followed closely by data as the next most important priority ranked by 30% of the respondents. The main reasons for these are to increase productivity (66%), minimize manual errors (61%), reduce costs (59%) and refocus people's efforts on non-repetitive tasks that benefit from human intervention (50%).

Of the various applications of AI that Manufacturing and High Tech sector senior level employees want to adopt in the next 12 months, the respondents indicate:

- 60% want AI to provide human-like recommendations for automated customer support/advice
- 58% want AI to process complex structured and unstructured data and to automate insights-led decisions
- 48% want to use AI to create a simulated experience that is essential to a decision making process
- 38% want to use AI to create a decision-making system in which machine learning allows the system to learn from humans and improve itself

20%

want to use AI to institutionalize enterprise knowledge

4

To become more innovative, 71% of the respondents indicate that they need freedom from having to perform mundane tasks, 61% say they need more avenues for experimentation, 58% say they need opportunities to learn new skills, 49% say they need exposure to new, breakthrough technologies and 42% need more collaboration with other people.

Two-third of the respondents from the Manufacturing and High Tech sector say employee lifelong learning is extremely important to their organizations. Of the reasons for why lifelong learning programs are important, 61% say it improves their ability to fit into new roles and jobs, 25% say it improves their productivity, and 10% say it prevents skills loss when employees with highly specialized skills retire or switch jobs.

MANUFACTURING AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE

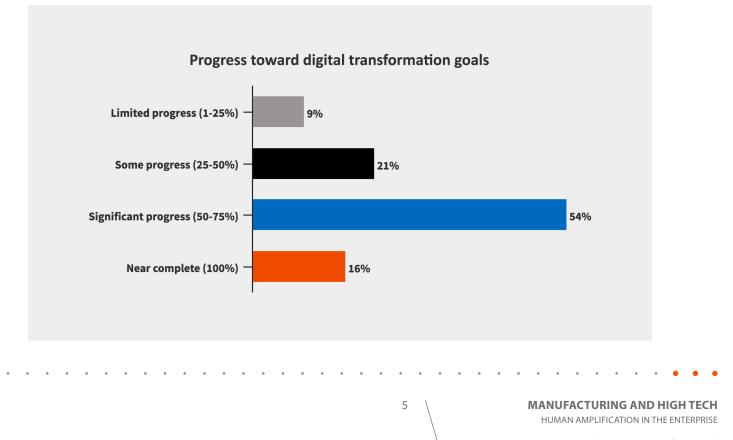
TRANSFORMATION CHALLENGES

Even though a majority of enterprises in the Manufacturing and High Tech sector are undergoing digital transformation, few have fully accomplished their stated goals. The respondents indicate that only 16% of the enterprises have accomplished their digital transformation goals, 54% have made significant progress, 21% have made some progress and 9% have made limited progress.

The main reasons listed for why these digital transformation goals are difficult to achieve are lack of data-led insights on demand (67%), lack of collaboration among teams (51%) and lack of time (40%).

When IT professionals were specifically asked about difficulties in achieving their enterprises' full-cycle digital transformation, they highlight IT misalignment (68%), entrenched resistance to change within the organization (59%) and time constraints (51%).

When asked about the challenges of adopting more Al-supported activities as a component of their digital transformation initiative, 58% of the respondents indicate lack of in-house knowledge and skills around the technology, 57% mention lack of clarity regarding the Al value proposition and 54% say there's lack of financial resources.



ABOUT INFOSYS

Infosys is a global leader in technology services and consulting. We enable clients in more than 50 countries to create and execute strategies for their digital transformation. From engineering to application development, knowledge management and business process management, we help our clients find the right problems to solve, and to solve these effectively. Our team of 200,000+ innovators, across the globe, is differentiated by the imagination, knowledge and experience, across industries and technologies, that we bring to every project we undertake.

Visit www.infosys.com to see how Infosys (NYSE: INFY) can help your enterprise thrive in the digital age.

SCOPE OF RESEARCH/METHODOLOGY

Infosys commissioned LEWIS Research to undertake the research upon which this report is based. 1,070 IT and business decision-makers were interviewed between 27th March and 18th April 2017. All are from organizations of more than 1,000 employees, with \$500 million or more annual revenue and from a range of sectors, in the United States. The majority of interviews were conducted using online interviewing with a small number of follow-up telephone in-depth interviews. All were undertaken using a rigorous multilevel screening process to ensure that only suitable candidates were given the opportunity to participate. Unless otherwise indicated, the results discussed are based on the total sample. The overall margin of error is +/- 2.91% at a 95% confidence interval.

MANUFACTURING AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE



MANUFACTURING AND HIGH TECH HUMAN AMPLIFICATION IN THE ENTERPRISE

External Document © 2017 Infosys Limited

7

	Ŭ.		, i i	Ŭ			Ť.	Ŭ										Ŭ	Ŭ.		Ĭ.										Ť.	~				
To run enformation, conclucat adagetificitory.com																																				
For memory many many many many many many many man	٥	• •	0	٥	٠	•	۰	٠	•	0	۰	٠	•	•	٠	•	0	•	٥	•	0	•	• •	۰	٥	۰	0	•	۰	0	٠	0	٠	0	0 0	0
For run run mana nu, nu nu a suscientary succession with the su	•	• •	•	•	٠	•	•	•	•	۰	٠	•	•	•	•	•	0	٠	•	•	0	•	• •	٠	•	٠	0	•	•	•	•	0	•	0 0	• •	0
Control from the number of a state state from the number of the nu	•	• •	•	•	•	•	•	•	•	٠	٠	•	•	•	•	•		•	•	•	•	•	• •	٠	•	•	0	•	•	•	•	•	•	• •	•	•
Construction	•	• •		•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	• •	•	•	•		•	•	•	•	•	•	• (• •	•
For monitormation, contact askus@infogs.com	•				•		•	•		•	•	•	•	•	•	•		•	•	•		•	• •	•	•	•		•	•	•	•		•	•	• •	•
Construction	•	• •			•					•					•			•	•		0	•	• •		0		0	•	•				•	•	• •	
Correctionmation, concat askue@infosy.com	•		0	0	•	•	•	•	•	0	•	•	•	•	•	•	0	•	•	•	0	•	• •	•	0	•	0	•	•	•	•	0	•	•	• •	•
Construction: Constr	•		0	•	•			•		•	•	•	•		•	•	0	•	•	•	0	•		•	0	•	0	•	•	•	•	0	•	•	o c	•
Construction: Constr																																		•		
Control of the state of t																																				
Correct information, contact askussinflogs.com Correct information, contact askussinflogs.com																																				
En une formation, contact asku@infosys.com																																				
Entering formation for the state which for the state may be the state and and an information and and and and and and and and and an																																				
Er uner formation, contact askug/mforys.com																																				
Control of the state of t																																				
Er mere information, contact askus@infory.com	•	• •	0	0	•	•	•	•	•	0	•	•	•	•	•	•	0	۰	•	•	0	•	• •	•	0	•	0	•	•	0	•	0	•	0 0		0
Control Control <t< td=""><td>•</td><td>• •</td><td>0</td><td>0</td><td>٠</td><td>•</td><td>•</td><td>•</td><td>•</td><td>0</td><td>0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>0</td><td>•</td><td>0</td><td>•</td><td>0</td><td>•</td><td>• •</td><td>•</td><td>0</td><td>۰</td><td>0</td><td>•</td><td>•</td><td>0</td><td>•</td><td>0</td><td>•</td><td>0 0</td><td></td><td>0</td></t<>	•	• •	0	0	٠	•	•	•	•	0	0	•	•	•	•	•	0	•	0	•	0	•	• •	•	0	۰	0	•	•	0	•	0	•	0 0		0
Tor more information, contact askus@infosys.com	•	• •	0	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	٠	•	•	•	•	•	0	•			•
Tor more information, contact <code>akuk@infosys.com</code>	•	• •	•	•	•	•	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	• •	٠	•	•	•	•	•	•	•	•	•	•		•
Tor more information, contact askus@infosys.com	•	• •	0		•	•	•	•	•	•		•	•	•	•	•		•		•	•	•	• •	•	0	•		•	•	0	•	0	•	•		0
Tor more information, contact askug@infosys.com	•	• •	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• •	٠	•	•	•	•	•	•	•	•	•	•	• •	•
Ever more information, contact <u>askus@info</u> sys.com	•	• •	0	0	•	•	•	•	•	•	•	•	•	•	•	•		•	0	•		•	• •	•	0	•	0	•	•	0	•	0	•	•	• •	0
2017 Inforsy tunited. Bengturu, Indix. All Rights Reserved. Thefory believes the information in this document is accurate as of the publication date such information such as a functional public date. The such as a functional public date is a constrained in the information in this document is accurate as of the publication date. Such as a functional public date is a constrained in the information informatin informatin informatin information information informa	•		0		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	• •	•	0	•		•	•	•	•		•	•	• •	0
Point private the proprieting of other companies to the trademarks, product mare and such other intellectual property rights functioner. The appreciation of thicky limited and/or any named intellectual property rights networking.	•																	•						•			•	•						•		
2019 Infosys Limited, flergalatur, India All Rights Beserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys downledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property informationed and trials document. Except as expressive permitted, enter the fully information or any part of the proprietary rights of other companies to the trademarks, product names and such other intellectual property information and part of the proprietary rights of other companies to the trademarks, product names and such other intellectual property information is subject to change without notice. Information or any part of the proprietary rights of other intellectual property information is not property information or any part of the property information is not property information or any part of the property rights holders under this document.	•									•								•	•	•								•	•					•		
Control Support	•																							•				•				•		•		
Control Support																																				
Ever more information, contact askus@infosys.com 4.019 Infosys Limited, Bengaluru, India, All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date, such information is subject to change without notice. Infosys believes the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, network without the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, network without the property rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document.																																			• •	•
Control Information, contact askus@infosys.com Control Information, contact askus@infosys.com																																				
Coll Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys downledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned. In this document. Except as expressly permitted, neither this document.																																				
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont																																				
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont																																				
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract									, i				×.													, in the second			Ť.							
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract	•	• •	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	•	•	•	•	•	•	•	•	• •) •	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•	•••	•	•	•	•	•	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	•	•	•	•	•	•	•	•	• •) 0	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract askus.com contract askut.com contract as	•	• •	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	•	0	•	•	•	•	•	•	• •	• •	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•	• •	0	٥	٠	•	۰	۰	•	0	۰	٠	•	•	٠	•	0	•	٥	•	0	•	• •	۰	٥	۰	0	•	۰	0	•	0	٠	0	0 0	0
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•	• •	•	•	•	•	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	•	•	•	•	•	•	•	•	0 0	• •	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract	•	• •	•	•	٠	•	•	•	•	٠	٠	•	•	•	•	•	•	٠	•	•	0	•	• •	٠	•	•	0	•	•	•	•	0	•	0 0	•	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract	•	• •	0	٠	٠	٠	٠	٠	•	•	٠	٠	•	•	•	•		•	•	•	•	•	• •	•	0	•	0	•	•	•	•	0	•	• •	J 0	0
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract.com contract.com contract.com contract.com contract askus@infosys.com contract.com contract	•	• •	•	•	•	•	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	• •	٠	•	•	•	•	•	•	•	•	•	•	• •	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract askus.com contract askut.com contract as	•	• •			•	•	•			•	•	•	•	•	•	•		•	•	•		•	• •	•		•		•	•	•	•	0	•	•	• •	
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be a contract askus@infosys.com contract askus@infosys.com be a contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com contract askus.com contract askut.com contract as	•		0	•	•	•	•	•	•	•	•	•	•	•	•	•	0	•	•	•		•	• •	•	0	•	0	•	•	•	•	•	•	•	• •	•
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•														•			•	•		•			•	•		•	•		•		•		•		
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•		0	•	•	•				•	•	•	•	•		•	0	•	•	•	0	•	• •	•	•	•	0	•		0	Ir	h		<u>א</u> ר	. .	0
For more information, contact askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com be more be a contract askus@infosys.com contract.com contract.com contract askus@infosys.com contract.com cont	•						•	•	•						•	•						•						•	•	•			い	})	5.	•
© 2017 Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.	•	Forn	nore	info	rmat	tion,	con	tact	task	cus@	info	sys.c	com	•				0	•	•	•			•	•	•				0	•					•
acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.	•	• •	٠	٠	•	•				•	٠	•	•	•	•	•	•	٠	٠	•	•	•	• •	•	٠	٠		•	•	•	•	٠	٠	•	• •	٠
acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.	•	© 2013	Inform	c imi	ed Po	naslur	م ما رو	ia • A II	Rinht	s Roca	nuad	Inform	s halia	Vac +h-	info	matio	nn in +	this de) CHIMC	nt ic -	COURS*	e 25 C	filte put	olicatio	n data:	such :	inform	ation	je eu b	ioet +-	o chan		thout -	notico	Inform	
prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.		acknov	vledges	s the p	ropriet	tary rig	ghts o	of othe	er com	npanie	es to th	he trad	demark	ks, pro	duct I	name	s and	such	other i	intelle	ctual p	prope	rty righ	ts men	tioned	in this	docu	ment.	Excep	pt as e	express	sly per	rmittec	d, neith	ner this	
Infosys.com NYSE: INFY Stay Connected 🔊 🛅 🛅 🐺																					any me	eans, e	ectror	nc, mea	.nanica	ı, print	ung, p	ιστος	opyin	y, reco	rding	or oth	ierWISE	:, witho	out the	•
INIOSYS.COM JINYSE: INFY	•	• •	•	•		• 	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• •	•	•	•	•	0	•		•	•	• •	• · · · ·		•
	•	intos	ys.co	om	INYSE	:: IN	ΓY	•	•	۰	٠	•	•	•	•	•	0	٠	•	•	0	•	• •	٠	0	٠	0	•	Stay	Conn	iecteo	a . 🔰	2 U	1 📠] 👑	0