Bilal Gokpinar
The impact of frontline employee innovation

Wed, 11/10 9:51AM • 32:38

SUMMARY KEYWORDS
innovation, mobility, organisations, research, company, problem, realise, observe, benefit, ideas, employees, industry, move, people, frontline, study, findings, terms, peripheral, solutions
SPEAKERS
Vaughn Tan, Theme music, Bilal Gokpinar

Vaughn Tan 00:03
Hello and welcome to Mind Shift, a podcast about innovation from UCL School of Management. I'm Vaughn Tan, an innovation and strategy researcher focusing on how organisations can flourish and adapt in times of great uncertainty. In each episode, I'll speak to one of my colleagues within the diverse community here at the School of Management, and will look through the lens of their research to get insight into the rapidly shifting world of business today.

Vaughn Tan 00:25
Bilal Gokpinar is here with me today. Bilal is the head of two research groups here at the School of Management: Operations and Technology and Marketing and Analytics. His research focuses on product and service innovation through technology and operations management and he also looks at digital transformation, exploring how small changes can make a big difference to businesses. He's applied this research to multiple fields, including healthcare, digital platforms, and robotics and his work has been published widely in academic journals and publications such as Forbes and the Financial Times. Bilal, before we get started on your research. Can you tell us a bit more about yourself? You started out studying industrial engineering? And I'm curious why, and how, you made the switch to management.

Bilal Gokpinar 01:09
I'm originally from Turkey, and like many other kids who are good in maths and science, I think kind of getting into engineering was like a pretty straightforward start, I would say. But after that, I quickly realised, you know, I'm not only intrigued by this kind of problem solving aspect of engineering, but also the people side of things and really the interaction between the people and the organisation, the systems, the technical aspects. And all of those, I think that led me to kind of make that transition. I'm very much interested in this kind of innovation/creativity aspect of engineering, and I'm mostly studying engineering or technical organisations, and how they can perform better in different ways.

Vaughn Tan 01:53
And would you say that your early training in engineering is affecting your approach, not just in terms of who you choose to study, but how you choose to study them?

Bilal Gokpinar 02:02
Yeah, definitely. I think, well, first of all, I am, as you mentioned, you know, I'm a Professor in Operations and Innovation Management. And really, part of that is maybe coming from the engineering background, I take a very kind of micro perspective on things, I really look at operational things, how exactly people are doing their jobs, and how can we improve that. And so definitely, this engineering training, I think, helped me a lot in really looking at those,

taking a closer look on actual happenings in organisations, maybe rather than just high-level leadership questions, etc.

Vaughn Tan 02:37
So a very grounded sort of approach to thinking about what to do research on.

Bilal Gokpinar 02:41
Exactly.

Vaughn Tan 02:43
Fantastic. Okay. So recently, you've been exploring this concept of frontline innovation and how internal mobility of employees can boost it or affected in some way, could you tell us a little bit more about these concepts and also, how you came to study them in the first place?

Bilal Gokpinar 03:00
Well frontline innovation is basically innovation that's introduced by people who need it in the first place, people who are experiencing problems. People then kind of really coming up with and identifying solutions to their problems. And in organisations, frontline innovation is typically the kind of innovation that's not coming from your research scientists or R&D departments, but really the kind of innovation that's coming from your frontline employees, like the engineers, the technicians, the assembly line workers, and, and that's really the kind of innovation that we wanted to study in this particular project. And actually, if you look at many of today's companies, a significant portion, up to 70-75% of innovation and productivity improvements they do come from those may be sometimes minor looking innovations that are introduced by frontline employees. So that's the frontline innovation. And mobility is really I think, as we understand it, it's employees visiting different sites in an organisation, spending time, but it's really the mobility is having a mobile workforce, it is some of your workforce moving across different sites and locations within a company.

Vaughn Tan 04:12
So for our listeners, who may be less familiar with sort of the frontline innovation concept, is it something building on this idea from Toyota way back about Kaizen coming up from people working on the production lines and finding ways of optimising the way they produce stuff? And what you're doing now is like pushing that to the next level?

Bilal Gokpinar 04:33
Yeah, exactly. Fantastic observation Toyota has been at the frontier of this kind of innovation, where it's really the employees that are kind of pushing the boundaries of the knowledge, of the work and really giving them the freedom and, in a way, responsibility to come up with the ideas to push the system to make it more efficient, to make it actually more productive. And really, we are seeing that being implemented. We have been seeing that for a long time, but now a lot of organisations are realising actually how critical that can be for your frontline employees to be at the frontier of this innovation process.

Vaughn Tan 05:11
Very cool. And so you were saying that, in your opinion, at the moment, maybe even the majority of innovation that corporations are able to use is coming from the frontline? Is that the reason why you're interested in this area of innovation generally? Or are there other reasons as well for why you're studying it?

Bilal Gokpinar 05:29
Well absolutely; these are the kinds of innovations I feel, okay, R&D departments, they are great scientists, and that line of innovation, it's definitely very helpful, but then I feel actually there is this kind of really underrated aspect of this frontline innovation that's been introduced by your everyday workers. And I think it is important to understand, I mean, we

have anecdotes, but in our case, we as researchers, we thought it will be a good idea to start studying this in a systematic way by quantifying the effects of this innovation and understanding the boundaries and conditions where it can be a feasible option, and where it can really lead to significant improvements within a company.

Vaughn Tan 06:11
One of the things that you said earlier on is that your engineering training really made you focus on very practical, operational research questions. And so I was curious whether you can tell us a bit about the difference between the formal academic research that you do, and the industry work that you do in this area? Like how would you think of the difference between what you're doing in kind of formal academia versus industry applied research?

Bilal Gokpinar 06:36
Well, first of all, I feel very fortunate to be an academic where, you know, I work on questions, on research questions, I can get to research them in a scientific way. But at the same time, being an academic in a business school, it is important, I think, it's very important to really study questions that are relevant, that can make an impact on organisations. As much as I can, I try to combine the two in a way. When I am studying an academic problem, I always try to start with a practical, relevant issue experienced by the companies and I tried to get actual industry partners. That's how I started, even back in my doctoral work - I was working with a large auto company in the US. And since then, I tried to find industry partners in undertaking kind of projects, obviously, there are differences like in academia, we have very long time lines, you know, like we start a project and in maybe 2, 3, 4 years' time, it can lead to a publication and academic output versus in industry, obviously, timelines are much tighter, you really need to get things going and then you really need to produce something in a few month's time. But I think really finding suitable partners, and I have been very lucky to find those so far, I think that really helps a lot. So that so ideally merging the two would be, I think, the ideal combination.

Vaughn Tan 08:02
Let's actually move the focus about your work on internal movements of employees, could you just tell us, summarise for us, the mechanisms by which you believe this actually helps with making the company more innovative in various ways, like what's actually happening, when employees move around, that helps with innovation?

Bilal Gokpinar 08:23
The kind of benefits it seems to be generating is in in two primary mechanisms. One, when you have employees working and moving to other locations, there's the short term benefit, what we call transfer of knowledge, and maybe just figuring out low hanging fruits, and just sharing some maybe good practices, which is pretty intuitive, I would say. But what we didn't maybe what we weren't expecting was really the the magnitude of the effect, that's something that really in terms of like a single move, can generate as much as, like 100,000 euros of benefits by these employees. So I think that was the first one. And second, what we realised was these employees, when they move, it's not just the short-term benefit, but then we observe really a significant long-term benefit in the sense that these individuals, they do become better innovators. So what we call is they get to experience this "conceptual learning", meaning that we call these kind of "know why" not just “know how”, not kind of just to the implication of what you do immediately, but really the root cause of this deep conceptual theoretical understanding of how things are working. So in a way these moves, they make these individuals better learners and better innovators in the long run.

Vaughn Tan 09:38
Can you tell us just a little bit about the context, you know, like, what kind of company is it and what does it do?

Bilal Gokpinar 09:44
This company is a large, like a multi billion business supplier to auto companies. So this is a large auto component manufacturers and in this context, it is really the margins are slim. You really have significant competition. So in order to do remain competitive in this marketplace, this this company earlier realised that it is very important to keep that innovation edge, keep it active and find ways to do it in a systematic way in an efficient way. And part of that was actually they had this innovation database, where anyone in the company can suggest these ideas, submit ideas into this database. But then again, one novelty we have observed was, it's not just ideas submitted and casually looked at, but really ideas seriously evaluated and putting kind of a Euro amount into each suggestion, and then trying to implement those afterwards. So it was a very systematic approach. And then workers realise that their suggestions, their innovation ideas, are not just kind of skimmed through, but they're actually seriously taken. And I think that was also a very important aspect of the whole process, in this case.

Vaughn Tan 10:55
Very cool. So what you're saying is that not only do you need to have the kind of internal structure that lets employees move around inside a company, the company also needs to have a structure and a system for evaluating and absorbing these innovations when they bubble up from the bottom. Something that you said actually really resonated with the research that I do. One thing which I focus on a lot is tacit knowledge and how you learn it. And it occurs to me that one thing that you're saying about the difference between “knowing how” and “knowing why” is that “know how” is something which I mean, is also tacit knowledge but “knowing why”, you know, the broader context of why a particular solution is a good solution for a particular problem. That's something that really in many cases can only be really viscerally understood by a person, if they're in a situation and are exposed to the situation that creates the problem, right? So do you think that the internal mobility is also something which naturally helps with other forms of tacit knowledge learning and transmission inside the company as well?

Bilal Gokpinar 11:54
Yeah, absolutely. So what we really observe in this case is when you move people around, and actually a key condition was also in our case, it's not just like work trips, or just some observations or training. These guys, the kind of mobility that we observe in the company we studied is really these guys they go and work on a specific problem, they are there for a reason. It's not for like a casual kind of work trip. But really, there is a problem, actually, they're called for the problem in the first place. And when this people move, they not only observe what's happening, but they actually work kind of shoulder to shoulder kind of, you know with the workers in the plant or in the in the site that they're visiting. So it is really those, I think those interactions that are meaningful, that are deep, that are on an actual problem solving task, we believe these are the key reasons why you observe such huge improvement from the ideas that are generated afterwards by these individuals.

Vaughn Tan 12:53
That's actually completely consonant with my own findings as well, like when I study restaurant R&D teams, the ones that are really effective are the ones that do the R&D work, as well as the reduction to practice with the teams that are actually implementing the new product that is being developed. So this idea that you work shoulder to shoulder with the people who are facing the problems, so that you have better solutions that are informed by a full context, rather than a very limited definition of the problem, I think makes complete sense to me. So I think moving into sort of thinking about the benefits, you've already alluded to some of those, I can imagine that employee mobility of this directed, very productive type that you're talking about, might be very beneficial for both the company as well as the employees, right?

Bilal Gokpinar 13:38
Yeah, that's a great point. So really, as you mentioned really, the two kinds of benefits we observe is both first to the company itself, obviously, and remember, this is a hugely competitive industry. And oftentimes, actually, these guys when they are getting, like, say, some contracts from the auto companies, they even put very little margins in terms of the contracts, but then they trust the workforce, they realise that actually, okay, this is the initial cost for us, but then we trust our employees, and we give them some room to innovate, to improve, maybe the kind of materials we use or the kind of processes we employ. And it is really, I think the benefit is significant in terms of remaining competitive in the marketplace, because they know that they can do better. So their initial estimates, they know that they can always improve on those. So that's why I think they have been extremely successful in getting contracts in being basically a leading supplier in their industry.
So that's to the company. And to the workforce, as you can imagine, these employees, they do realise that what they suggest, their ideas, they are making a difference in the company. And one thing actually that may be interesting to to erm observe here is there is no formal rewards actually to these ideas. So you suggest an idea it's successful, it's implemented. It's not like you get some formal bonus or anything it is- it's just part of the culture that I think that empowers the employees as well, which I think is quite significant. And ultimately with these moves, as I mentioned earlier, they do become better learners, they will become better innovators by sharing this knowledge and by really working on the problems that may be slightly out of their comfort zone. But then it is when they work next to other workers there, then I think it's really you get to see, I think, a significant benefit in terms of engagement and interactions, which I think is ultimately keeping this workforce, I'm sure, quite happy and satisfied as well.

Vaughn Tan 15:36
And I think one thing, which you mentioned that I want to really highlight as well, which I really believe also, it's that if you move people to a context that is slightly different from the one in which they are very habituated, they're very comfortable, and they become slightly uncomfortable. That discomfort actually makes them better learners, right? Like they become more used to the idea that it's not always supposed to be that you're comfortable all the time. It's that when you're uncomfortable, that's when you learn.

Bilal Gokpinar 15:59
Yeah.

Vaughn Tan 16:00
Very cool. Okay, so I think earlier, you mentioned some things about when these kinds of mechanisms that are underpinning the benefits of internal mobility are seen and when they're not seen, I would love for you to sort of unpack that a little bit more. When do you find this kind of internal mobility to be most effective? You mentioned that when it's focused on a specific problem so it's not some kind of random moving for movement sake? Are there other circumstances or conditions that you have found make this kind of internal mobility more effective? And also, when is it not effective?

Bilal Gokpinar 16:36
Yeah, actually, this is also related to your your last point on making kind of maybe people a bit uncomfortable. But I think that's the key thing, like maybe a bit, what we observe, actually in our case is the real benefit you get is when you have sites that are somewhat different from each other, let's say from a peripheral manufacturing plant to another kind of peripheral manufacturing plant where there is some variation, but what we call this "related variation" in the kind of tasks, in the kind of major products and processes that you're dealing with. When it becomes too unrelated, when the similarity between the sites are too far, then it's actually we don't, you know, observe as much benefits to these

kinds of mobility and exchange and I think that's quite intuitive because people do learn and I think it really helps the whole innovation process, when you experience some related variation into the products, the context, the systems that you deal with. But then when you deal with a system that is too far away, it's just there is not much, it becomes really very difficult to transfer or to implement in anything that you observe there. And actually, we feel that that's a significant in a way trap that we observe in organisations, typically, in manufacturing organisations, at least. A common practice is you send your let's say, peripheral site people to the headquarters or to your main factory, so that they can "learn the way to do things", etc. But we realise actually, those are really the least efficient moves because it's just very different - the kind of products, the kind of systems that you are dealing with in a peripheral plant is very different than a central kind of a leading plant. So what we observe is the significant benefits you gain is when you move someone in one peripheral plant to another peripheral plant, where they're still dealing with this kind of similar kinds of processes, maybe similar kind of products. But then there's lots of learning opportunities still. So kind of one thing we advocate is actually based on our research, is maybe companies should start maybe rethinking about these internal moves either from central to their peripheral locations, or vice versa. But really think more closely about these more peripheral moves, or people from more similar locations to reap the most benefits.

Vaughn Tan 18:52
I think that's a really interesting insight that has, I think, really clear, practical implications. But I wanted to push on that a little bit and ask the question, which I think maybe will be coming up in the listeners minds as well, which is that if you move someone from a context that is very different from the one that you move them to, there is a much higher chance that there is difference of experience that will lead to more sort of diversity of information transfer, right? So there's probably some trade off between how different the origin and the destination sites are and how much learning is possible from that move. And so is what you're advocating to find some kind of optimal point between the two. So that not only from a discomfort perspective, but also from a potential for learning perspective, you're optimising for the both of them?

Bilal Gokpinar 19:39
That's a good point. And it's very hard to be kind of not too prescriptive in exactly right. Like what is the right level of relatedness or similarity? But I think part of research gives some food for thought for organisations where without maybe thinking about the implications too much we have this "okay, let's send these peripheral people to the central location so they can learn that the frontier kind of practice," but then that frontier practice may not necessarily kind of benefit them at this kind of immediately. So that's why I think basically, in our research, rather than giving a very kind of like a full-fledged prescription, I would say our research gives some insights into where kind of this mobility, maybe companies can rethink about their mobility practices. And one thing we observe is clearly the effect that in terms of the innovative ideas, and the impactful ideas, we have seen the most impact in those really similar site moves. It doesn't mean that there is no benefit in the other moves, there was some benefit, but just it was much smaller in comparison to those peripheral to peripheral moves that we observed in our in our company.

Vaughn Tan 20:45
I think so far what you've been talking about a lot has been an auto components supplier and manufacturer. And I think your research so far focuses a lot on manufacturing and the auto industry specifically, how much do you think your findings can apply to other types of organisations? You know, like, how much can you take these insights and apply them to organisations in different industries, maybe organisations in the same industry, but in different countries where the cultural norms of working are different? Tell us a little bit more about that?

Bilal Gokpinar 21:15
Yeah, that's a good question. I think in terms of to what extent our findings may apply to other organisations, I think definitely looking at... I'm quite familiar with a large variety of manufacturing industries, I think manufacturing industries where you have a significant workforce on working on technical aspects of things so a lot of frontline involvement in actually setting up processes, in improving processes, etc. I think that that can apply to a large variety of manufacturing industries. In terms of other industries, I think there are a lot of similarities. if you think about it, really, mobility is a concept where we observe like even as academics, right, we do have sabbaticals. We do go visit other universities for short term or for a longer term, and it's really kind of what we observe there. Like one thing, actually with my co-authors, Philip Cornelius, he's a former PhD student in our school, now he's an assistant professor at Rotterdam School of Management and Fabian Stick at University of Cologne. You know, when we discuss these observations, these findings that we had in this context, a lot of times we were thinking about our own academic life, the sabbaticals, how these moves can actually make an impact. And I think a lot of people can relate to our findings in different contexts, in service industries, I think, it's also similar to some extent. So really, the idea of mobility and the short-term benefits, and really longer-term benefits in terms of this conceptual learning kind of mobile understanding, we feel are quite broad concepts that can apply to different industries and different contexts as well. But we are hoping to conduct some maybe field experiments with potential companies to actually see to what extent it will apply it in other contexts and other industries.

Theme music 22:59

Vaughn Tan 23:09
So I think one of the things that obviously is at the top of everyone's minds right now, is this problem that we're facing in the world, not even the aftermath, we're still in the middle of the Coronavirus crisis. So how do you think organisations can deal with the problem of using internal mobility as a tool for creating more innovation or more innovative organisations, given this new situation that we're in, which may become the new normal, like, we may simply not be able to travel as much in the future or travel may become less automatic and normalised in the future? So what do you think the implications are for your research and the application of it?

Bilal Gokpinar 23:48
Yeah, very good point. And it is indeed, I mean, these are probably not easy times to advocate kind of mobility. And actually, maybe funnily, when we had this research paper and findings, we contacted one of the kind of leading practitioner magazines about our article about our research, and the response we got was, well, look, I mean, we are in the middle of COVID and you are suggesting we should advocate mobility sorry, we cannot really have it at this time. And this is understandable, obviously, I think a lot of us, a lot of organisations, they do realise mobility has its limitations, and especially post COVID. Maybe companies need to be more selective, right business travel as we take for granted. And I mean, even before COVID, I think there was some discussions about is that really all the kind of carbon emissions all the money, is it worth it? And I think there is no easy solution for that. But one thing we observe very clearly is mobility matters and it does help companies in a significant way. So maybe it doesn't mean that companies may have limitations in terms of how and to what extent they will keep maybe employee visits or mobility inside their organisations. But I think what our results shows is is twofold - one it matters and it really can help, can provide significant and maybe sometimes unseen benefits to organisations in terms of innovative ideas, in terms of solutions that these provide. And second, as I mentioned earlier, what you observe is some moves are just better than others, at least kind of in terms of the impact. So maybe what this suggests is there can be kind of this strategic thinking about mobility. Another thing is actually this is remember, this is mobility about frontline workers, like your engineers, technicians, and typically, I would say,

in many organisations that I have worked with, there is this feeling that, okay, business travel by high level senior managers, executives to get the deal done,
etc. That's important, that's critical, but I think they don't maybe necessarily realise as much and how, to what extent, they say maybe middle kind of workers or kind of frontline workers have their moves, their mobility can significantly benefit to their company. So I
think that's really important to maybe take a closer look, and maybe a plan for setting up your mobility, and internal kind of movements inside your organisation.

Vaughn Tan 26:06
Excellent. I wanted to sort of go a little bit deeper, as they say, double click, the thing which I wanted to ask you about is this question of virtual mobility, in the sense of putting someone from one team into another team, but doing it virtually on Zoom or, you know, through teleconferencing or some other kind of remote work. How do you think this works in the context of your particular setting, which is for frontline workers, you know, where the thing that they do is usually, it's embodied? It's on site, it's in a particular location? Is virtual mobility possible at all for this kind of thing?

Bilal Gokpinar 26:40
In my opinion, again, I think it's probably - I think it's a it's an excellent research question. I think it's like it calls for proper research and study, I think to investigate. But as far as I can tell, based on the insights we gained from our study, I think it's very hard to replace those like really actual physical interaction that you have when you visit a certain location, right when you work with these individuals next to one another. But having said that, I mean, there are limitations even right now, right? There are lots of travel restrictions faced by companies, faced by different organisations. And I think maybe in the presence of that, companies can start thinking about maybe more carefully on this kind of what you call virtual mobility. And one thing, for example, I think that can benefit a lot is again, I
cannot emphasise enough how, during the working on an actual problem, it's not just some training, not just some passive observation. So I would say actually, if there is no other way to do that, then if you're doing virtual mobility, you better make it actually worthwhile by not just doing some, let's say, team building exercise or some cool kind of social event,
but actually give them an actual real problem, and let them work on that next to one another. I think, again, it may not be the same experience as working in physical presence. But I think in the absence of that the next best is probably to work on an actual real
problem. That's probably one insight I can provide based on our understanding in this study.

Theme music 28:06

Vaughn Tan 28:13
What are some good structures that you would like to see for organisations to set up so that they can absorb frontline innovations better?

Bilal Gokpinar 28:23
Well, I think one thing that maybe is somewhat underestimated, I think, in many contexts is really, first of all your frontline workers, they can be a significant source of competitive advantage and innovation. And to do that, they really should feel empowered.
And that's what we have seen, as you mentioned earlier in Toyota, this is an issue that when I talk to companies, okay, everyone talks about big data, machine learning,
or robots automation, but oftentimes, I mean, no machine, no kind of big data will replace individuals in terms of really coming up with ideas and solutions and innovations. Actually, we have seen that for example, in Tesla, Elon Musk, right? When they start experiencing lots of production problems in Model 3 in their plans, which was actually fully automated, like which had the highest robots intensity. Part of that was actually they didn't have enough individuals to deal with these things or to come up with solutions. He posted this Tweet saying humans are underrated, kind of excessive automation can hurt a company.

We shouldn't really look for these shortcuts or okay, robots or automation will solve our problems. No, it's really our - it's the humans, it's the frontline workers who will solve your problems. Well, it's great if you can make use of the digital technologies automation, but I think really empowering individuals and giving them that sense of responsibility. That's I think what Toyota did, like say 50 years ago, and and now really, if you look at the companies who are successful, they are the ones I think where they empower the employees. They expect employees to come up with solutions.

Vaughn Tan 30:03
I guess the last question is, and this goes back to this idea of the new normal that we're in, what is the one industry you think we should be taking a look at? And why?

Bilal Gokpinar 30:15
That's a good question. And I mean, a lot of my work has been in auto industry and others, but more recently, I have been doing some work in the healthcare domain. And I think it's one of the key industries where I think we have seen a lot especially you know, just it's been I think kind of mind boggling the past few years, all the needs, all the kind of demands in our health care systems all around the world, right, both developed world developing world, but then I think we have seen some very good like examples of frontline innovation - medical doctors, not really some innovation team kind of suggesting some improvement, the way that they connect with their patients, the way to do things. And I think there is a lot more room in innovation, in frontline innovation, especially I think, in the healthcare delivery domain. We have seen heroic efforts, we have seen some strong improvisation, I think very, I think, very creative solutions. But I think we should really try to make those more systematic, and hopefully, for longer term benefit. I think, now, a lot of things we have seen where I think people realise there are opportunities to do things in a bit differently, maybe kind of taking a more open minded approach in certain things. I think maybe you as like myself now all the kind of the digital tools, the kind of the mobile solutions, etc. I think this is the next frontier. And I'm sure there will be lots of exciting developments that will be happening in the healthcare sector in the coming years.

Vaughn Tan 31:45
Fantastic. Bilal, thank you very much. That was super interesting. I mean, I've known about your work for years, obviously. But this is I think the first time we've ever had a deep dive into one core area and really sort of tried to pull apart some of the implications not only for research, but also for practice. So thanks very much for joining us today.

Bilal Gokpinar 32:05
Thank you so much, Vaughn.

Vaughn Tan 32:10
You've been listening to Mind Shift, a podcast about innovation from UCL School of Management.

Vaughn Tan 32:14
Today's guest was Bilal Gokpinar. And we'll put links to their research in the show notes.

Vaughn Tan 32:20
This episode was presented by myself Vaughn Tan, edited by Cerys Bradley, and produced by UCL School of Management.

Vaughn Tan 32:27
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