

Presentation SOLA conference Norway.
Outsourcing Maintenance: Solution or the Problem.

Some history: In the beginning of passenger aviation, airlines have had their maintenance done in house because they had to, since experience was low, fleet varied enormously, standardization wasn't there at all and training, licensing, regulation etc. was poor, if even existing.

The moment aviation grew into a more adult industry and manufacturing grew out of the barns and workshops they started in, the need for trained staff and component workshops started. From then on, almost all airlines had their in-house maintenance.

First, no independent maintenance organizations existed; maintenance was a crucial part of the operation of the airline since reliability was poor, and taking aircraft away from the airport of operation was out of the question. Often even the maintenance had to be transported to where the aircraft was stuck on a field or harbour. With the high number of aircraft crashes that happened after World War 1 when the cowboy pilots were doing their tricks most crashes happened as result of failing engine parts, bad weather landings and or simply stupid pilots.

Regulation was driven by the need to reduce casualties (bad advertising for the new way of transport) and bring some structure into operation and with that, the need for more specialized trained staff evolved. Redundancy built into major aircraft systems and structure, as well as an increased complexity of aircraft system demanded that. Since training was simply nowhere available to buy, many airlines setup their own training schools trying to turn bicycle and car mechanics into something that could pass on as an aircraft engineer. Airlines learned the hard way that regular maintenance was a necessity for something that looked like a regular reliable schedule of operation. Initially the Engineer was highly regarded and was often considered as the safe keeper of the aircraft he maintained, but as time went on and more and more maintenance personnel was required to keep the ever increasing fleet of aircraft safe than he became the dirty grease bag that fixed everything but was hardly recognised, and poorly rewarded for the often bad working conditions and difficult work.

Like in most airlines, pilots and cabin crew were more appreciated and better rewarded being the "face" of the airlines. With growing complexity of aircraft, maintenance moved away from poorly lighted workshops and bad shelters to modern hangers and high quality sophisticated computerized workshops. This modern appearance and the need for better trained staff costs more and then the "bean counters" came in.

With the new aircraft being more reliable than ever and a withdrawing regulators approach to self-regulation of the industry, the era for outsourcing was ready for take-off. These new regulation possibilities and the worldwide acceptance of some kind of "standardized" licenses and certificates as well as the growing differences in labour cost from one region to another, this was bound to happen one day.

With the ever growing size and complexity of aircraft and with that the work packages for heavy maintenance, (**some containing over 60,000 man-hours of work**), the low cost countries blossomed at the edges of the main areas of aviation). These low cost countries tried to get a piece of the pie and I personally cannot blame them. They have developed rapidly and their lack of technical experience disappeared faster than many expected.

Low and high season usage in the past allowed airlines to do large work packages in long-term ground time projects (D-check in 3-4 month) during winter season while operating full swing with mainly line and small base maintenance activity in summer season. Nowadays this is no longer financial smart operation. Not using an expensive aircraft for such long time costs money as well.

This change in operation style created a growing problem for many small fleet airlines trying to organize their maintenance and keeping costs under control. They started to seek other solutions like outsourcing maintenance or splitting up maintenance packages into smaller parts.

With maintenance costing around 20% of the operational costs of running an airline and with the ever decreasing ticket prices, higher oil prices, open markets and the end of government subsidizing national airlines, something was bound to happen.

Just stating that outsourcing is bad is too simple, even for unions. Of course we like to keep the work we are doing, nobody denies that, however setting up your own heavy maintenance facilities when you are running a small fleet, is plain stupid, on the other hand outsourcing everything just for the sake of the almighty (although severely eroded Euro) is not always the solution either. Finding the right balance is important; however this balance is different for every airline.

When representing staff, unions in maintenance organizations should demand for a fair and balanced decision whether companies should outsource or not and that's where the problem starts. Having been involved in many discussions about such decisions for my own employer. I personally have been involved in the decision process of outsourcing 737 maintenance for my own airlines some 15 years ago and was unfortunately confronted with heavily manipulated financial figures, just to prove that outsourcing was beneficial (but for whom?).

Always when management has to make up a business case for higher management on which they should decide (weighting the pros and cons) what the outcome should be, the preparing management can manipulate the figures to show their **desired** outcome. Figures presented are often trusted as being the truth. Many managers like to work with Excel sheets whereby with manipulating a number here or there immediately the outcome becomes visible. They love using graphs and working with averages and outcome showing in bright colour graphical presentations. Somehow people have more trust in those than plain figures.

Let me tell you one thing about the way figures and averages can be misleading; on average the adult population of this country has 1 Testicle, and 1 breast per person. You and I know that on average that's close to a hundred per cent true, we also know that the reality is completely different and for us males in the audience, This is something many of us pay attention to on a daily basis by checking with the female part of the population, if these 2 are actually there. We also know that the laws of nature simply tell us each of us has 2 of the same kind however they may vary dramatically in size and shape. J

Now back to the management, by using the figures available and decide to take many things into the calculation leave them out or ridicule them (**when they are not what wanted but they cannot ignore the truth because everyone knows them**) they manipulate the outcome as they please.

Here is where our union work should begin. When being a member of the workers counsel within my company I had the right to all information by Dutch Law. Which may be not be the case in many other countries, I (we) had (together with my colleagues) raised many arguments against the outsourcing and (with hindsight) we were right even though initially the decision was made to outsource some checks. However, the fact we were right, only became clear when some years later and some bad experiences wiser, the calculation was done again but know with a completely different outcome. The outsourcing was reversed.

I can understand that when word comes out that your employer want to outsource some or all of the maintenance emotions run high, after all, this is our livelihood they are talking about. However, if ever possible, try to leave emotions out of the discussion as long as possible since this only pushes management into a hedgehog defence and creates a trench war where, in the end, everybody loses. In these circumstances, the discussion hardens, and nobody listens to the other party arguments anymore. Results: negative till the end. When you want to fight it, do it with reason and arguments.

The process for unions or staff representation however should start long before outsourcing even becomes an option. My own experience is that major decisions like these are known (or can be expected) long before they actually happen when you learn to read the signs. In my view Unions should on a regular basis for instance once or twice a year, have open debates with their members. We should do this, as they say with the feet on the table so to speak, about issues such as:

The future of the industry in general,
The future of, in our case, engineering and maintenance,

Our task is then; try **to foresee what are probable the threats to and possibilities for our profession.**
When we foresee negative outcome, we should prepare ourselves and decide what to do.

Questions such as:

What are the threats or opportunities? **Can we expand, diversify, co-operate with others?**

- What should we do to try to minimize damage?
- If some issues are unavoidable what should we do **to ensure that the affected staff will not simply be made redundant?**
- Demand backup plans,
- Demand retraining for different functions,
- Training persons for future work,
- Trainings in writing your CV,
- Training courses how best to apply for a new job etc., etc.

Because decisions are not made yet you have time & therefore leverage, since the company is bound to continue for some time, the way they were, so if you then go “on strike or take other actions” you have power and it will cost the company money and “public face” if they play it wrong and you play it right. This is not easy, said in 2 minutes but requires a completely different approach from unions than they did in the past. Change from only fire-fighter role which is often today's approach into fire prevention specialist.

One issue of great importance is the quality of the company to which the maintenance work is outsourced and how this is to be compared with your situation. Over time we have learned not to trust to rely on the so called “Approved Company By your local NAA or EASA 145”. AEI, through our information from local affiliates, have learned not to pay too high a value on a Maintenance Repair Organisation being “approved”. I know this is a harsh criticism but not one without proof of.

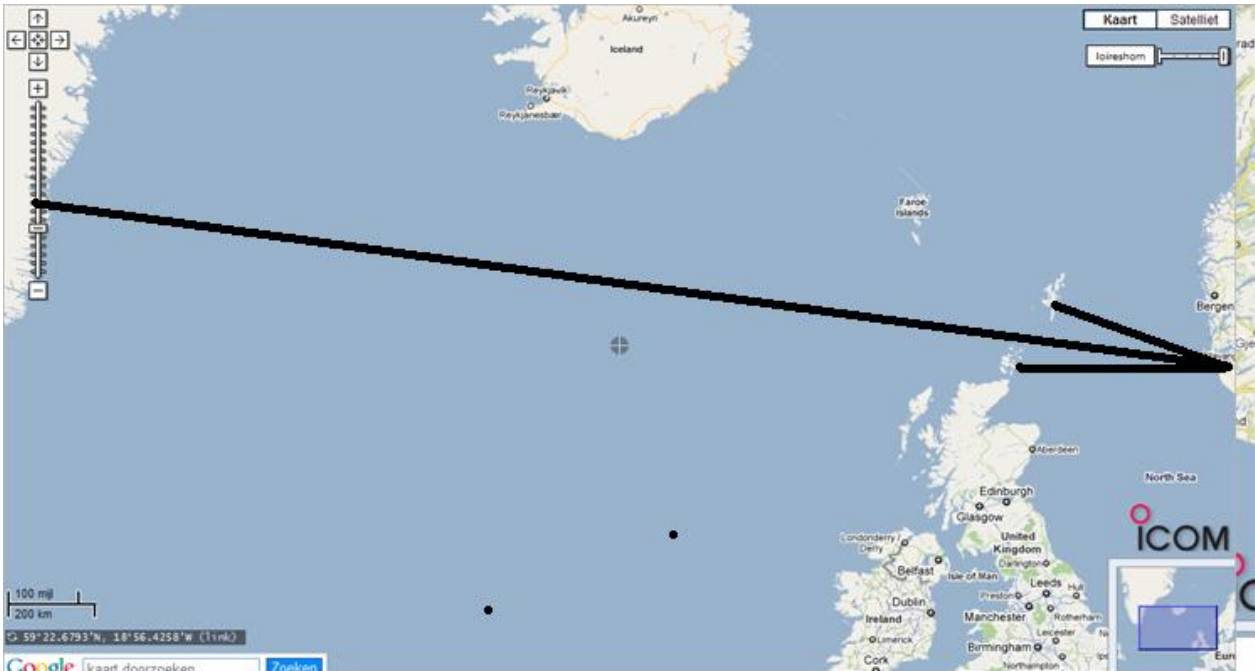
Just recently we had an Australian affiliate who had to fight its local NAA in court for 3 years to get access to the results of the so called “Audit results” of foreign MRO being the company chosen for the outsourced work. **Show Movie ALAEA Fight** They learned that despite many faults that show up during this audit and in following maintenance projects the National authorities did their utmost to defend this particular MRO, (often used for outsourced maintenance and failed on so many items) It was impossible to deny that the NAA in question was more busy pleasing its national carrier Qantas with a cheap outsource facility than that of a NAA performing its main task, namely guarding the safety of those who used the airline, the passengers. **For instance: After a heavy maintenance on a 747 the aircraft left the facility with over 450 defects in the so called “released to service” condition. This came out in a deep probing newspaper investigation and became a huge scandal that probably will cost some civil service staff their job. However this is not an isolated case on its own.**

As a result of this opening of Pandora's Box, we (AEI) have demanded from the European Agency EASA similar information about this company since we know that the same is true in Europe or for European airlines outsourcing to the same company and situations like these are very likely possible for us European Operators.

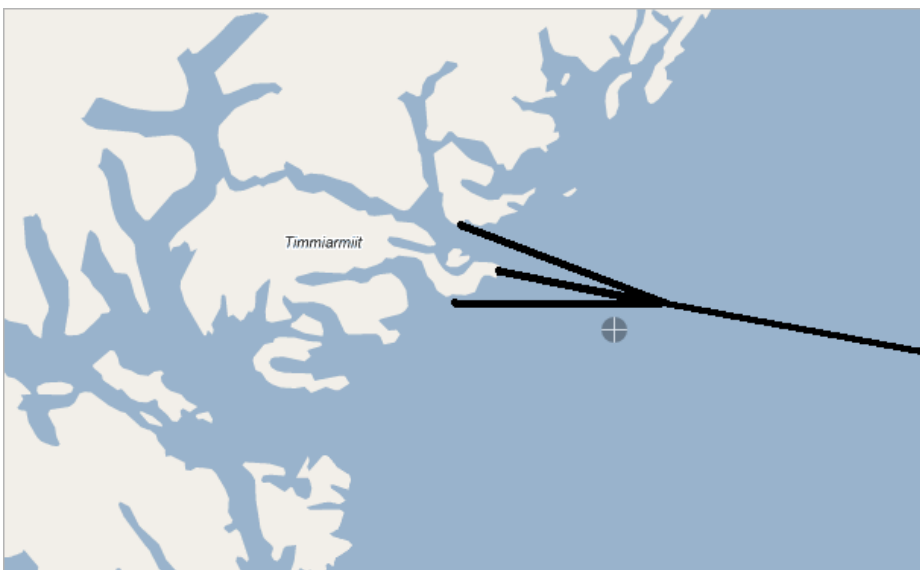
Your task as staff representatives is to investigate such situations as well and not to rely on too easily given statements by management like “it is an EASA approved MRO so no need to worry” It is a matter of protecting the flying public, as well as your colleagues, crew and “the company” since one accident can crash even the best company like we have seen with Swiss Air as an example.

Back to the outsource issue.

My advice to staff representatives is to get yourself involved if ever possible and as early in the process as you can and to study these processes themselves. Early is very important since a small change in the beginning of the journey toward an outsourcing process can have a largely different outcome at the end of a long process.



For example: If I sail out of Stavanger port at a course of about 280° West and I get some influence forcing me out of my initial course around 5° North or South and I continue I might not end at my destination Greenland set but on the Shetland Islands (UK) or the Orkney Island (UK) and nowhere near my original destination.



If I have a similar influence near my destination (timmiarmiit, Greenland) later on, I arrive somewhere else but very close to my original destination

So the earlier in the process you get yourself involved the more influence you have on the outcome.

To do that you have to get about the same amount of knowledge about the process itself as management has, In order to find the weak spots in the arguments, management is using. This is not easy but necessary to get the arguments to move the balance of the decision in the other way, in my view, you simply have no choice. Fight the decision with knowledge and arguments based on facts and even management cannot ignore that.

Often the labour cost Euro or Kroner / Hour argument is used as the main argument for the outsourcing, but outsourcing contracts are not simply setup like this. Often these contracts have a base price for the standard

package and anything extra is calculate extra. The first argument for you is that management often compares apples and pears. The price of the maintenance is not known to both parties in advance, they might have some ideas but all parties try to avoid big mistakes since this always comes out. What your company could raise as arguments is they have a better idea (at least that's what they think) of how much in-house maintenance costs. The next thing is that they have probably been offered a "teaser" price by the bidder to this contract, to break open the negotiations. Once the first deal is won the next one will be higher. Like in many other deals, whether it is buying a mobile telephone or Cable TV contract.

Your second argument you have to use is when a company has to pay for outsourced maintenance, that it is always "out of pocket money" and in addition the remaining staffs in the existing maintenance department still has to be paid. Your hangars still exist, costing money and now even more money per man hour of maintenance performed since those costs remain the same, but the number of man-hours work you perform yourself in them decreases; This is basic mathematics or business knowledge that often tend to be "forgotten or left out of the calculation" since this lowers the profit "earned with outsourcing".

On top of that, even when you downsize maintenance organizations, a lot of the support functions of a maintenance department don't disappear. Making staff redundant costs money as well. With a smaller maintenance department actually many of the other costs per man-hour output go up but this is often hidden in the finances and out of sight for most. This gives you strong arguments and reasons to adjust the "Calculated advantage" of the outsourcing and the smaller it becomes the better chance you have to keep it in house.

What airline managers tend to "forget" when creating their arguments for outsourcing is that proper process control costs time and money even when outsourced.

Cost wise arguments:

- Flying the aircraft to the other location costs money,
 - a. including pilots salary,
 - b. daily allowances, fuel,
 - c. ATM costs,
 - d. Landing fees,
 - e. Hour costs per flight hour,
 - f. Travel costs back and forth to home base, etc.
- Management makes meetings at the other location costing money.
- Contract making up cost money,
 - a. Lawyers,
 - b. insurance,
 - c. Negotiations
- Parts / component management to send back and forth to the place of outsource cost time and money and you often have to have permanent staff involved in your own company to keep track of this. This costs additional money but probably nowhere to be found in the calculations.
- Spare parts sent away cannot be used for in-house repair if you have another airplane grounded. Often a heavy maintenance project is a possibility for loan parts for the rest of your fleet in case of AOG. That's the way it works with most airlines.
- The costs of sending your own support crew to "help" the project at the new location,
- Educating of the new company on your procedures, your administration process, manuals, work packages etc. cost money as well, as well as the many mistakes made in the beginning with sometimes high costs (grounded aircraft etc.) to repair.
- Having to pay for each nut, bolt and washer with the associated administration and control you have to create in your own organization to see you are not being ripped off (as often happens).
- What to do, and who will pay for fixing defects or mistakes, with defects appearing after the Heavy maintenance check in the first weeks or month after the aircraft is returned? This is a heavily under estimated financial risk, often not (fully) covered by the contract since some issues are difficult to proof.

- How much money is lost when an aircraft is not ready in the planned time and slips out of his slot is often difficult to calculate? You may have to hire foreign aircraft to cover the operation, is this calculated somewhere?
- Who pays for that, including the associated costs of delays, cancellations of flights and loss of passengers, rebooking of flight and hotel costs? Are these costs taken into the calculation in the “Advantage” of the outsource.

Supporting arguments against the proposal

1. Your own staffs have an active interest in having a good product leaving the hanger, rather than the outsourcer who is pushing out a (bad) products, looking nicely new painted. It looks good, but is it good? You have just seen the movie Out of the hanger, out of sight, out of control. Drop the problem over the fence and it's gone. Your own staff knows when it is done badly they have to solve the problems themselves, nobody takes over.
2. You have control of the quality of your staff as well, but you have to try to determine the quality of the staff of the outsourcer.
3. Errors made in the administrative process by the outsourced organization due to inexperience's or uninterested staff does not relieve the operator of its responsibility so he remains fully responsible.

Additional benefits of in house maintenance:

1. Knowledge of your own fleet that is lost with the work moved to a new maintenance organization,

More arguments against outsourcing:

1. Prepare your engineers who will go and accompany the outsourced maintenance, by instructing them and “helping them to write occurrence reports” for every mistake found. You have to do Case building.
2. Painted and polished but badly maintained by uninterested staff for which your aircraft is just one in a number. Studies and Experience show that if you work on an aircraft of a customer you have a different attitude and perspective of quality, as technician, then when working on your “own” aircraft. That is simple human behaviour.
3. Having an organization that no longer performs Base & Heavy Maintenance can have an effect on the experience level of the workforce **Often the first maintenance to be lost due to outsourcing is D-check (once every 4-8 Years) maintenance since there the related costs for transporting the aircraft away from the original airport have the least effect.**
4. Sending aircraft away for a week's FC program is far less effective as we see in most operators. This is the type of maintenance most airlines continue to do and give the possibility to keep the experience level that most engineers would like to maintain.
5. When discussing outsourcing of C checks there is more reason to focus on the additional costs since the effect is much large giving the Staff representatives solid arguments against outsourcing.

I probably have forgotten other items but you may know them yourselves.

Some experience we have had in addition to my example before, and that could be used as arguments are: We have had aircrafts coming in for 5 weeks after outsourced heavy maintenance back to Schiphol to be placed in the hanger for another 3 weeks to get everything fixed to the standard we require. Discussion on who had to pay for that went on for years. Aircraft nicely painted, including the dirt, needed a repaint of the entire aircraft within 6 month, illegal repairs that had to be redone at great expenses, grounded aircraft due to open maintenance entries discovered when administration went through the documentation Making it impossible to release the aircraft back to service until the problem was solved, and so on, and so on.

Of course your management will try to ridicule that or state they will have it fully under control, It is properly regulated in the contract and so on. I can only advise you, always demands an evaluation process including insight in all related documents this to ensure you give yourself an opportunity to correct things when it goes wrong. If the decision turns out in favour of outsourcing, demand a recalculation once the aircraft has had its maintenance and demand that, when you agree (or not actively oppose) with

outsourcing, you can always reverse the decision if the calculation turns out to be negative, and results deviate more than a certain percentage from the proposed figures.

Ask the manager if he is so sure he is right about outsourcing, that he quits his job if it turns out he was wrong, Make him responsible for what he says and make that known to all. Try to put public pressure on this.

Some managers are so eager to prove themselves, they might trap themselves. It gives you leverage in future debates; when you can prove he failed miserably and not only fooled the unions, but at the same time fooled his upper management.

Every union (should) understand that in today's financial situation you cannot keep a 100 men staff for just 4 month a year work, but we have to make the management to understand, that there is more than one way to skin a cat, as they say and technicians are very flexible, proud of their work and want to keep it that way.

Within KLM the decision to outsource 737 D checks was luckily reversed after about 3 years since the calculation used initially (and we had disputed those reasons & figures when they were presented initially, Failing to stop the outsource) changed over the years:

- Benefits turned out to be too low,
- Costs were higher than expected,
- Often the quality was below what we were used to from our own organisation, resulting in additional work between the regular checks.
- Often the downtime was higher than we used to, when doing them ourselves.
- The contractor did not do anything extra beyond the requested contract **even when they found serious errors or defects during their inspection and that turned out to create many discussions and costs for additional work which in turn resulted in more downtime than agreed. This time the contractor had arguments not to pay the penalty since the extra work was not agreed.**

In the end it was often too many headaches the organization was not happy with. Our organization was not the only one where decisions about outsourcing were reversed later. Also the man-hour costs of a number of low cost countries have risen heavily over the last 10 years changing the calculation results.

To conclude:

I think it is too easy to say staff and or their unions have to be against any form of outsourcing maintenance, but I am 100% sure that if you involve yourself in such processes and follow the entire process that involves outsourcing discussion critically, and keep a sharp eye on the necessary safety aspect, you can make your well-considered (pros or cons) decisions that can be explained to your members as well.

We should not wait until management comes with the proposals for outsourcing but we have to use our own knowledge and sources of information (or find this knowledge through our many contacts) and be ahead and get yourselves ready so when the question comes, you have your answers ready or almost ready.

Be prepared to fight for your beliefs: I know there is much knowledge amongst your membership, use it. It may mean that you, as unions have to change the way you work, from being reactive and respond to threats for your membership and act like firemen. You have to become pro-active. If not, you lose the battle. This is not only about outsourcing, because many more issues in the aviation industry need such attention.

I give one example what I mean. 2 years ago "suddenly" Nokia in Germany closed its factory almost overnight and moved the work to a low cost country, sending 1800 men and women into unemployment. Unions were furious about the displacing of work to low cost countries. Later it became known that, to the workers in the factory, it was not a complete surprise because most workers already knew for more than 2 years this was going to happen, they only did not know when, and therefore did not prepare themselves for the changes to come.

If unions would have had regular meetings with their membership on the expected future development within the organisations they would have known this and they could have used this information to be prepared, To demand plans to retrain people giving them better possibilities on the labour market, give people time to change, time to educate themselves for other jobs. Now this time was lost. I promote the same solution in my own union trying to have such discussions with key members and try to look ahead 3-5 years in the future looking for possibilities and threats and change our actions accordingly.

This is not easy, it may need other union leadership behaviour, it may need investment but unless unions change the way they work, they lose their attractiveness for new young members who demand to know what a union can do for them. If we do not change we slowly die and become extinct.

So back to outsourcing:

Especially in an existing organization it is very worthwhile for unions but also for airlines to think thoroughly and honestly about the implications of outsourcing maintenance and make sure the airline does not bind itself to long term contracts however lucrative they “might” look initially. Once you have broken down your own organization it is almost impossible to restore it, if it turned out you made the wrong decision, at least not without high additional costs and efforts.

I know it will be a lot of work, if you involve yourself in such processes, but it can make the difference when the decision falls, Question every argument, check every figure, demand management proof their points, and be aggressive, if needed.

You don't have to know all the answers yourself as long as you can ask the right questions and from the answers you will be able to get the feeling this man or woman is trying to sell me bullshit or not.

One smart “fool” can ask more questions, than 10 wise man can answer.

I wish you wisdom, strengths and determination.

F.Bruggeman
AEI Secretary General