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FLDM - Q4 2016 Fluidigm Corp Earnings Call

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**Bill Quirk** *Piper Jaffray - Analyst*

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## PRESENTATION

**Operator**

Good day, ladies and gentlemen, and welcome to the Fluidigm Fourth Quarter Earnings Conference Call. (Operator instructions) As a reminder, this conference is being recorded. I would now like to turn the conference over to your host, Ms. Ana Petrovic. Ma'am, you may begin.

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**Ana Petrovic** - *Fluidigm Corporation - Director of Corporate Development & IR*

Thank you. Good afternoon, everyone. Welcome to the Fluidigm Fourth Quarter 2016 Earnings Conference Call. At the close of the market today, Fluidigm released financial results for the fourth quarter and full year ended December 31, 2016. During this call, we will review our results and provide commentary on recent commercial activity and market trends.

Presenting for Fluidigm today will be Chris Linthwaite, our President and Chief Executive Officer, and Vikram Jog, our Chief Financial Officer. This call is being recorded and the audio portion will be archived in the Investors section of our website.

During the call and subsequent Q&A session, we will make forward-looking statements about events and circumstances that have not yet occurred, including plans and projections for our business, future financial results and market trends, and opportunities. An example of these forward-looking statements include expected changes to our commercial and organizational structure and business strategies, and anticipated impact of such changes, expected timing for releases of new products, changes in competitive dynamics, potential applications and growth drivers for our products and businesses, cash management and other financial plans. These statements are subject to substantial risks and uncertainties that may cause actual events or results to differ materially from current expectations.

Information on these risks, uncertainties and other information affecting our business and operating results are contained in our quarterly report on Form 10-Q for the quarter ended September 30, 2016, and our other filings with the SEC.

The forward-looking statements in this call are based on information currently available to us and Fluidigm disclaims any obligation to update these forward-looking statements except as may be required by law. During the call, we will also present some financial information on a non-GAAP basis. Non-GAAP information is not prepared under a comprehensive set of accounting rules, and should only be used to supplement an understanding of the Company's operating results as reported under US GAAP. We encourage to carefully consider our results under GAAP as well as our supplemental non-GAAP information and reconciliation between these presentations.

Reconciliation between GAAP and non-GAAP operating results are presented in a table accompanying our earnings release, which can be found in the Investors section of our website.

I will now turn the call over to Chris.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Thank you, Ana. Good afternoon, everyone. Thank you for joining us today for our Q4 and year-end call. I'll begin with a quick summary of 2016, followed by a recap of our fourth quarter performance, and spend the balance of the time discussing the progress we made based on our strategic review.

First, a few comments on 2016. Clearly, 2016 was a year of change for Fluidigm. Despite having access to three interesting end markets, we failed to deliver against our financial commitment. As a result, in October we changed executive leadership followed by a reorganization of our sales and marketing organizations. We also suspended forward-looking financial guidance and initiated a thorough strategic review. I am pleased with the number of difficult items we tackled concurrently in the quarter, and while we did not grow year-over-year in the period, in the fourth quarter we believe we saw some stabilization in our funnel, and we also secured new customers.

In summary, while we are encouraged by our progress and sequential revenue growth of 13%, we are not satisfied. Importantly, we are conscious of the work ahead of us and ready for the challenge. We are taking the necessary steps to change the Company's prospects for the better.

Now, starting with our fourth quarter performance and first quarter outlook, total revenue for the fourth quarter of $25.1 million decreased 18% from the year-ago period, mainly due to softness in revenue from instruments, and to a lesser degree, consumables, partially offset by services.

Instrument revenue of $10.7 million in the fourth quarter decreased 32% compared with the year-ago quarter, due to softness in sales across most platforms, primarily driven by Helios and to a lesser extent, [C1] systems. Consumables revenue of $10.3 million in the fourth quarter decreased 12% compared to $11.7 million in the year-ago quarter, due to lower revenue from IFCs partially offset, or partly offset, by mass cytometry consumables. Service revenue of $4.1 million in the fourth quarter increased 26% compared to $3.3 million in the year-ago quarter, due to increased service contracts.

Despite the overall negative picture, there were a number of highlights for the quarter. First, revenue from mass cytometry consumables continues to drive and deliver strong growth, up 33% year-over-year in the fourth quarter and 40% in 2016. Second, mass cytometry product revenue experienced strength in biopharma, which could represent a key signal in terms of market adoption compared to our historic academic research base. Third, China experienced robust growth, up 77% in the fourth quarter, and 98% [in] 2016. Finally, we released our imaging mass cytometry system to high-priority customers in December, and we're building a healthy backlog. Notably, while it is still early days, we are encouraged by the level of interest across academic and biopharma customers for this product.

Shifting to our outlook, as a reminder, during our call last quarter we withdrew our 2016 annual guidance due to recent volatility in the business. However, given some improvements in the visibility of our pipeline, we are re-introducing guidance and will start by providing quarterly guidance.

For the first quarter, we are projecting total revenue to be roughly flat with the fourth quarter. Moving on to some key activities in the quarter, we are steadfastly focused on the strategic pillars noted during last quarter's earnings and outlined in our earnings release earlier today. There are three elements: foster innovation and partnerships; increase operational efficiency; and improve financial discipline and cash management.

I'll now devote the majority of the time remaining to walk you through the underpinnings of these strategic pillars, beginning with fostering innovation and partnership. With regard to innovation, we are continuing the pioneering spirit that got us here, but with a more disciplined and measured approach to portfolio management, balanced by three factors: revenue potential, margin profile, and technology development risk. In terms of partnerships, we are open for business and focused on expanding our network while supplementing our business with strategic partnerships and alliances. This is a shift from our prior approach to the market.

Now, I'd like to highlight some of the key actions we took during the fourth quarter on innovation and partnership. First, we moved to strengthen our mass cytometry business with the metered commercial release of the IMC to high-priority customers in December. The IMC is uniquely positioned to add tremendous value in imaging individual cells, enabling dimensional biomarker detection and spatial context. Accordingly, we believe it will have profound implications for various therapeutic areas, and represents a new dimension to our growth story. While it is still early days, we are pleased with some of our early interactions with consortia such as the Cancer Moonshot Task Force, and the potential for the adoption of this technology for the next generation of tumor microenvironment studies.

Second, we expanded the Helios applications menu and launched high-parameter maxpar mass cytometry panels that allow immuno-oncology researchers to simultaneously profile T-cell populations from limited or precious samples up to 34 markers. These versatile panels can be combined for complete coverage, or flexibly customized with access to hundreds of commercially-available, pre-conjugated antibodies and custom conjugation options.

Third, we released a new medium-high cell, or medium-cell, high-throughput IFC for the C1 system, with higher single-cell capture performance, capturing up to 800 cells, providing industry-leading sensitivity.

Finally, we entered into a partnership with GenomOncology, on a distribution agreement to co-market the GenomOncology, or GO, Clinical Workbench for molecular interpretation of somatic [variants] identified using Fluidigm systems. The combined offering will enable laboratories to achieve greater workflow efficiencies and productivity from next-generation sequencing library preparation, variant annotation, and reporting. We expect more partnership announcements throughout the year.

Moving on to our next priority, we are firmly focused on improving our operations. To achieve our results, we created an operations council to identify and drive projects to deliver significant cost savings, to enhance the efficiency and efficacy of our global operations, among many [functions]. We expect to see improving efficiency throughout the year based on taking action with respect to low-hanging fruit, and will give updates on accomplishments and milestones periodically.

In addition, another key step we took to improve operations was the hiring of a Business Process Excellence leader. Just this past week, we hired the Company's first Business Process Excellence leader. He's an experienced executive who will work with me to build a Fluidigm business system that drives cost improvement, deploys practical methodologies for making us a more efficient company. This must become part of our organizational DNA and will pay dividends every year.

Turning to our third pillar, a key initiative for Fluidigm is to employ disciplined cash management onto our growth strategy. First, as part of the initiative to increase financial discipline, an early action we took in the quarter was to establish our business transformation office to realign investments, infrastructure, organization, talent capital, and functional capabilities against the financial requirements of our evolving business. We will provide periodic updates as we implement on these measures.

Second, in the first quarter of 2017, we initiated a process to realign and right-size our organization, including initiatives with respect to headcount as well as other operational efficiencies. As a result, we expect to realize approximately $8 million of reduced operating expenses in 2017, before severance expenses. We expect to begin to realize the benefit of our 2017 cost reduction initiatives in the second quarter.

Third, we consolidated our direct sales teams from two channels, selling into research and applied accounts, into a single, direct channel that is geographically focused on account management in their respective territories, supported by technical specialists.

Finally, we are excited to announce recent additions to the sales team in Asia, filling out some high-priority open territories in our selling organization. We hired a commercial director for greater Asia-Pacific as well as a new general manager and a new sales manager in Japan. All three seasoned individuals bring a wealth of experience and knowledge to the team [as] industry veterans.

Before I end with my closing remarks, I want to take a moment to provide some context around our new strategic vision. As we articulated during last quarter's earnings call, a key priority for us was to re-examine and re-assess our markets and strategic direction. Our first order of business was to take a step back and analyze our business in an unbiased, holistic way. Over the last few years, Fluidigm has organized itself as a pioneer in the field of single-cell biology, particularly single-cell genomics. That pioneering spirit is still alive and well. As I noted earlier, the imaging mass cytometry provides a potentially disruptive [step function] capability for researchers to characterize single cells in a spatial context.

But single cells have always been but one sample type among many that our technology portfolio addresses for customers, and genomic markers, specifically micro-RNA single cells are only one relevant set of targets for our arsenal among many. We have so much more to offer. Our focus in 2017 is to position Fluidigm as a key partner for translational biology research, and ultimately empower healthcare insights in 2018 and beyond. Our portfolio of technology positions us well, at a time when the intersection of (technical difficulty) genomic and protein insights becoming more important [in] diseases such as cancer. But, to achieve our goal requires that we drive some different behaviors as a company. For instance, we must rebalance the effort that we make in pursuing the next breakthrough in technology, with an attention to more complete workflows, applications, content, software and collaboration, as compared to our prior approach as a component supplier.

I believe we have made some significant headway in refocusing the Company in these respects. For example, we re-aligned our business with our strategic markets, namely mass cytometry and genomics, which includes [buy-through] for genomics and single sell genomics together. We also revised our product strategies and portfolio allocations in line with our goals for revenue, margin, and technology [revenue].

In closing, despite a challenging 2016, we are ready for the work in front of us. We begin the year with great enthusiasm and are excited to share our achievements as the year progresses. With patience, diamonds can form under pressure. Such patience and the appropriate application of pressure, we attend to achieve our goals for Fluidigm and its shareholders, delivering on our commitment in a more predictable manner.

Now, I'd like to turn the call over to Vikram, our CFO.

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**Vikram Jog** - *Fluidigm Corporation - CFO*

Thanks, Chris, and good afternoon, everyone. Before discussing the fourth quarter financial results, I'd like to take a moment to add some context around changes we made to the install base and pull-through metric.

As noted during our last earnings call, re-engagement of customers with inactive instruments is a key priority for us. In the meantime, we believe that our active install base presents a better gauge of instrument utilization compared to the total install base. Accordingly, beginning with this earnings call and annually thereafter, we will report our active instrument install base which excludes instruments that were sold over six quarters previously, and for which there were no associated consumables purchases in the previous six quarters.

In addition, we will concurrently provide projected annualized consumables pull-through for the following year that includes assays and reagents.

Now, turning to the quarter and full-year results, total revenue of $25.1 million in the fourth quarter was down 18% from $30.7 million in the year-ago period, and up 13% sequentially. For the full year 2016, total revenue of $104.4 million decreased 9% from $114.7 million in 2015. Instrument revenue of $10.7 million in the fourth quarter decreased 32% compared to $15.7 million in the year-ago quarter, due to softness in sales across most platforms, driven by Helios systems and to a lesser extent, C1 systems.

Instrument revenue in the fourth quarter grew 16% sequentially, driven by mass cytometry [instruments].

For the full year 2016, instrument revenue of $46.8 million decreased 20% compared to $58.5 million in 2015, due to decreased revenue across [most platforms] driven primarily by lower revenue from genomics instruments, particularly C1 systems.

Our active install base of approximately 1,340 instruments at the end of the fourth quarter comprised in the aggregate approximately 585 Biomark and EP1 systems, approximately 230 Access Array and Juno systems, approximately 365 C1 systems and approximately 160 mass cytometry systems.

Consumables revenue of $10.3 million in the fourth quarter, which includes IFCs, assays, reagents and antibodies, decreased 12% compared to $11.7 million in the year-ago quarter, due to lower revenue from IFCs, partially offset by Helios consumables. Consumables revenue in the fourth quarter grew 16% sequentially.

For the full year 2016, consumables revenue of $42.2 million decreased 3% compared to $43.7 million in 2015, driven by lower revenue from IFCs, particularly Access Array IFCs, partially offset by Helios consumables.

For the fourth quarter, our genomic analytical IFC pull-through tracked moderately below its historical range of $25,000 to $35,000 per system, per year. Our genomic sample prep IFC pull-through tracked substantially below its historical range of $15,000 to $25,000 per system per year. And our proteomics consumables pull-through tracked within its historical range of $50,000 to $70,000 per system per year. Please note that going forward, we will compare quarterly pull-through performance with our full year 2017 pull-through projections instead of our historical annualized pull-through.

Service revenue of $4.1 million in the fourth quarter of 2016 increased approximately 26% from $3.3 million in the year-ago period, and for the full year 2016, service revenue of $15.2 million increased 23% from $12.3 million in 2015.

From a market perspective, genomics product revenue of $12.3 million decreased 26% in the fourth quarter compared to $16.7 million in the prior year period, and for the full year 2016, genomics product revenue of $60.3 million decreased 19% from $74.7 million in 2015. The year-over-year decline for both the quarter and the full year was driven primarily by decreased C1 and Access Array product revenue.

Mass cytometry product revenue of $8.6 million decreased 20% in the fourth quarter compared to $10.7 million in the prior year period, due to decreased revenue from Helios systems partially offset by increased revenue from consumables and imaging mass cytometry systems. Note that mass cytometry product revenue in the fourth quarter of 2015 was historically high.

For the full year 2016, mass cytometry product revenue of $28.7 million increased 5% from $27.4 million in 2015, due to increased revenue from consumables and imaging mass cytometry systems, partially offset by decreased revenue from Helios systems.

Now by customer type, in the fourth quarter, research customers comprised 63% of our product revenue of $20.9 million, with the balance from applied customers. Geographic revenues as a percentage of total revenue for the fourth quarter 2016 were as follows: United States 52%, Europe 27%, APAC 20%, and 1% other. Year-over-year total revenue growth rates by geography for the fourth quarter were as follows: APAC was up 8%, United States was down 4%, and Europe was down 37%, and other was down 79%.

Revenue from Europe was down 37% year-over-year in the quarter, mainly due to lower revenue from Helios systems. As a reminder, we benefited from some large orders in Q4 of 2015.

Revenue from Asia-Pacific was up 8% year-over-year in the quarter, driven by continued strength in China and partly offset by weakness in Japan, impacted by the lack of adequate sales coverage, which we began to address this quarter, coupled with an ongoing challenged commercial environment.

GAAP product margin was 52.1% in the fourth quarter of 2016, versus 49.6% in Q3 of 2016, and 58.1% for the year-ago period. The year-over-year decline in GAAP product margin was mainly due to fixed amortization costs and lower revenue. Conversely, the sequential increase in GAAP product margin was mainly due to fixed amortization costs and higher revenue.

Non-GAAP product margin was 69.6% for the fourth quarter of 2016 compared to 70% for the year-ago period, and 70.2% in Q3 of [2016]. The year-over-year decline was mainly due to lower average product selling prices, partially offset by favorable product mix from selling higher-margin consumables.

Turning now to OpEx, GAAP research and development expenses were $8.8 million in the fourth quarter of 2016, compared to $9.7 million for the year-ago quarter and $9.3 million in Q3 2016. The year-over-year decrease in research and development expenses was primarily due to higher cost projects in the prior-year period, including the development of the imaging mass cytometry system. The sequential decline in R&D expenses was mainly due to lower headcount.

GAAP SG&A expenses were $22.8 million for the fourth quarter of 2016 compared to $22.1 million for the year-ago period, and $21.1 million for Q3 of 2016. The year-over-year increase in SG&A expenses was mainly due to executive severance expenses and legal expenses, partially offset by lower outside professional services, trade show and travel expenses.

The sequential increase in SG&A expenses was mainly due to executive severance and higher legal expenses.

GAAP net loss for the fourth quarter of 2016 was $17.7 million compared with a net loss of $12.9 million for the same period last year. Non-GAAP net loss for the fourth quarter was $9.3 million, compared with the $6.9 million for the year-ago period. GAAP net loss for the full year 2016 was $76 million compared to a net loss of $53.3 million for 2015. And, non-GAAP net loss for 2016 was $41.6 million, compared with a $24.4 million non-GAAP net loss for 2015.

Now moving on to the balance sheet, total cash, cash equivalents and investments were $59.4 million at the end of 2016 compared to $71.2 million at the end of Q3 2016, and $101.5 million at the end of 2015. Net cash used in operating activities was $39.1 million for 2016 versus $34.7 million for 2015. The year-over-year increase was largely due to the higher net loss, partially offset by improved collections.

Net cash used in operating activities was $10.7 million in the fourth quarter of 2016 compared with $13.2 million in the third quarter of 2016. The sequential decrease was largely due to the semi-annual interest payment on our outstanding convertible debt in the third quarter. Accounts Receivable increased to $14.6 million at the end of the fourth quarter, from $12.8 million at the end of Q3 2016. DSO at the end of the fourth quarter of 2016 was 53 days, compared to 52 days at the end of Q3 2016.

And now moving on to our first quarter financial guidance, we expect total revenue for the first quarter of 2017 to be approximately flat, compared to Q4 of 2016. GAAP operating expenses, which include estimated severance costs, are projected to be between $33 million and $34.5 million. Non-GAAP operating expenses are projected to be between $28.5 million and $30 million, excluding approximately $3 million of estimated stock-based compensation expense, and approximately $1.5 million of estimated depreciation and amortization expense.

Total cash outflow is projected to be in the range of $11 million to $12 million for the first quarter. This includes capital spending, and interest payments on our convertible debt of approximately $2.8 million, and severance expenses of approximately $1.5 million. As a reminder, our semi-annual interest payments on our outstanding debt are paid in the first and third quarters of the year.

Please note, for modeling purposes we expect to begin realizing the benefits of the approximately $8 million in reduced operating expenses starting in Q2, divided across the remaining three quarters of the year.

And finally, for 2017, our projected annualized consumables pull-through per system is as follows: $33,000 to $38,000 for Biomark and EP1 in the aggregate; $25,000 to $30,000 for Access Array and Juno, collectively; $10,000 to $15,000 for C1; and $50,000 to $60,000 for mass cytometry.

And with that, I will now turn the call over to the operator to open it up for questions.

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## QUESTIONS AND ANSWERS

**Operator**

(Operator instructions) Our first question comes from Bryan Brokmeier from Cantor Fitzgerald. Your line is open.

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**Bryan Brokmeier** - *Cantor Fitzgerald - Analyst*

Hi, good afternoon. Do you have any sense for why customers aren't using the inactive systems?

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

There's a little reverb in the background.

**Vikram Jog** - *Fluidigm Corporation - CFO*

I think the question was a sense of why (technical difficulty) systems. So, let me add some color to this and maybe Chris can supplement. So, there's a couple of dynamics between the -- within the inactive systems. So, one dynamic is the changeover in the Access Array platform, from the Access Array to the Juno, as we have pointed out in the past. So, as a result of that, more and more of our Access Arrays are getting inactive as customers are switching over to the Juno. So actually, if you look at the 500-ish delta between the active systems and the previously-disclosed install base of roughly 1,800 systems, the bulk of that is the Access Array platform.

And secondly, not surprisingly, is the C1 dynamic, a couple factors there. One is the competitive headwinds, and the current value -- sorry, the current use model in single-sell prep being high-throughput has placed some pressure on the utilization of C1, exacerbated by the doublet problem and the time it has taken for us to put a replacement chip onto the market.

So, I would say that those are the two biggest dynamics in the inactive system.

**Bryan Brokmeier** - *Cantor Fitzgerald - Analyst*

So for the C1 we could see improvements? You know, you could try and get some of those systems back online?

**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Yes, Bryan, I'll take this one. Yes, absolutely. There's strategies in place for both situations we just described, whether it's the C1 systems or the Biomark systems. I think there's ample opportunity for us to reactivate those accounts.

**Bryan Brokmeier** - *Cantor Fitzgerald - Analyst*

Okay, thank you.

**Operator**

Thank you. Our next question comes from Doug Schenkel of Cowen & Company, your line is open.

**Doug Schenkel** - *Cowen & Company - Analyst*

Okay. Good afternoon.

**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Hey, Doug.

**Vikram Jog** - *Fluidigm Corporation - CFO*

Hi, Doug.

**Doug Schenkel** - *Cowen & Company - Analyst*

So maybe a follow-up on the inactive instrument metric you provided, and I appreciate that level of disclosure. You know, one of the surprises relative to our model was the number of active C1s coming in, really around 100 below the installed base number we have in our model. Do you believe that the attrition of your existing install base, I guess if that's the way to put it, has started to stabilize? I guess what I'm asking is, what level of increased inactivity should we be contemplating in our models moving forward, not just for C1s but for all platforms?

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**Vikram Jog** - *Fluidigm Corporation - CFO*

I think Doug, it's fair to say that this is something we need to watch, I would say, over the next two quarters. A couple of dynamics to watch just because of the methodology that we've adopted. We've taken a look at six quarters. So, by definition there will be some lag by the time we [snuff out] all the inactive systems. But, offsetting that is the recent launch of the high-throughput medium cell chip, and that should have an offsetting impact. The third factor I will mention, and we don't really know which direction that will take, is that there's a lot of unknown on the cell atlasing programs, and exactly what shape they might take and what the direction it might take in terms of whether throughput will come first, and followed by [breadth], or will they be both done in parallel.

So, right now, I think the safest way is just to wait and watch over the next two quarters, and we expect it to stabilize around about the middle of the year or so.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Yes, I think it's difficult for us to speculate too quickly on the velocity in either direction. I think this is something that we really started more aggressively in the fourth quarter to put concrete programs around. It varies, (inaudible) [channels] on Bryan's question. Inside sales is something that we're just bringing online to help focus on those accounts, same thing with things [I call] dead accounts, inactive accounts with service contract attachment. There's some success we've seen, particularly in the service line, as related to reactivating or reattaching service contracts. The second step of that process is to then attach a (technical difficulty) [blowing] back through.

So, we're earlier in the process of getting inside sales activated, but we're further along on things like service contract attachment, and then the cell atlasing program presents a whole new wild card. (technical difficulty) a couple key meetings this quarter that will hopefully start giving more clarity on how it's going to play out over the (technical difficulty).

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**Doug Schenkel** - *Cowen & Company - Analyst*

And just to be clear, your commentary, is that all specific to C1 in terms of needing you know, another quarter or two to see how this plays out? Or, are these efforts to stabilize the install base and maybe even reverse some of the inactivity? Is it broader than the C1?

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Well, I think as Vikram touched on in his comments, there's other platforms at play here, I think (technical difficulty) touched on the Biomark. We talked also on the Access Array which was the transition from one platform to another. I think with Biomark, there's an opportunity for us to do a lot more. You'll see -- you've already seen us begin to put the menu of applications out there that are broader, so initially, we (technical difficulty) Biomark is attached, largely part of the C1 workflow. But Biomark on its own, also provides a lot -- the original history provided a lot of benefit in phenotyping. And so, I think we're going back to reactivate the base with additional panels and value propositions on that, and I think that's got a different set of remedies than the C1 and it has a different (technical difficulty). I think for Biomark, it was really a lack of attention to it. We could have been cultivating those a lot more than we had. C1 has a different dynamic.

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**Doug Schenkel** - *Cowen & Company - Analyst*

Okay, thank you for that, and pivoting to service revenue which was a clear bright spot in the quarter as well as for the year, based on install base trends and the slowdown in the pace of DVS placements, which have the biggest ability to move service revenue, could you talk about your visibility for service revenue growth over the coming quarters, and how resilient this line item should be viewed over coming quarters?

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**Vikram Jog** - *Fluidigm Corporation - CFO*

So Doug, obviously, we're not giving guidance beyond Q1, but generally speaking your observation is valid. As we have said, we have experienced double-digit growth in 2016. So, while our instrument placements have slowed down, we've done a fairly good job I would say -- a very good job -- in the attach rate of those instruments through service contracts. The other dynamic is there are variations in the attach rates between instrument platforms and generally speaking, the mass cytometry franchise has a higher attach rate. It tends to be a more complicated instrument compared to say, the C1 and such. So, I think it's a factor of the install base being one, but also doing a good job in increasing the attach rate.

The latter effort of course will continue in 2017 and going forward.

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**Doug Schenkel** - *Cowen & Company - Analyst*

Okay, and one last one. You know, we just talked about, I guess a good guy for the year. One of the notable bad guys, at least in the second half, was European performance. You did attribute this in your prepared remarks to at least in part, tough DVS comparisons. That said, I just wanted to hear if there was anything specific going on there with your commercial efforts or competitive dynamics? And more broadly, we've heard some of your peers speak about academic funding, uncertainty in continental Europe and the effect that that may be having. Just wondering if that was a factor that affected performance? Thank you.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

You bet, Doug. Yes, I'll add, I'll comment and then maybe Vikram will add a few different comments. So, I think within Europe it certainly was a very disappointing performance for us on a full-year basis, as well as on a year-over-year change. Some of the comments I think we even touched on in the prior quarter call were things such as, there's more competitive options now in the single-cell market than there were in the past. What that's done is had an impact on the tendering process, the tenders that we thought that would come through were actually not competitive tenders, they're now more competitive. That stretches out the process by three, four, five months. That's one of the impacts that I think has tempered the growth or certainly the [contraction] in the European market is a heightened competitive dynamic. It is a process the markets are a function of, the markets that we're focused on.

Helios was another area, and the third was sales force turnover which we touched on in the last call. So, I think those three events are the primary impact. I think we're putting things in place to address them, but it's way too early to speculate on the impact of that going (technical difficulty). Vikram?

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**Vikram Jog** - *Fluidigm Corporation - CFO*

Yes, I would just have said the same thing.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Thank you, Doug.

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**Operator**

Thank you. Our next question comes from Bill Quirk of Piper Jaffray. Your line is open.

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**Bill Quirk** - *Piper Jaffray - Analyst*

Great, thanks. Good afternoon, everyone.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Hey, Bill.

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**Bill Quirk** - *Piper Jaffray - Analyst*

Hi, Chris. Vikram. First question, Chris, is just thinking about is the business is pivoting amongst the different segments, and certainly you've talked at length about the opportunities here in mass cytometry. But to help us, I guess, think a little bit about the margin, associated margin profile with that, historically it's been lower than some of the legacy Fluidigm gross margins. And so, how -- without asking for guidance, help us think a little bit about pacing, maybe?

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**Vikram Jog** - *Fluidigm Corporation - CFO*

Yes, so I think we've talked about this before, given the relative differences in volumes of both the units of instruments between the mass cytometry business compared to the legacy genomics business. And, we've also talked about the high margins we've experienced in the C1 particularly. I think it's safe to say in the short run, that there will be pressure on margins as we pivot or as C1 -- sorry, the mass cytometry franchise becomes more significant.

But, I'll say that when the genomics instrument was at that same level of volume, we had those pretty much to the same margins. So, it's a function of increasing volume, will have the effect of increasing or decreasing the cost of goods sold. The other dynamic on margins that's not particular to any particular platform or so, is the related selling prices. And as we have mentioned many times before, for modeling purposes we always encourage analysts to model in the high 60s, and because we wanted to keep our powder dry to take advantages of elasticity and demand based on pricing. And those are areas that we will continue to study and explore in the future.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Yes, I'll just add on that, I've been -- one of the opportunities I saw when I came into the fourth quarter, the fact that the ASP decline has been virtually or very marginally, little ASP decline in our business. But yet, we've seen a (technical difficulty). So, that raises a lot of questions, that (technical difficulty) process. So, I know on a macro situation, [you need to be] cognizant of margin performance, but I want to re-ignite the placement overall, and work on things we can do to take costs out, and shore back up margins again. But to me, we need to put more focus on getting (technical difficulty) growth back in the business. And the mix, since it's relatively close to portfolio (technical difficulty) mass cytometry has not been a major source of (technical difficulty) for us, in our (technical difficulty).

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**Bill Quirk** - *Piper Jaffray - Analyst*

Okay, got it. Appreciate all the color both from Vikram and as well as your color added, Chris. I guess the second question for me, just thinking about the imager, you mentioned that you had placed it with some select kind of high-value customers in the fourth quarter. How should we be thinking about feedback, and then obviously, opening that up to your broader mass cytometry customer base? Thanks.

**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Yes, I'll start with that, and then you can add any comments you'd like. Bill, I think the principal thing for us, is we really started to put those in place really in the December time frame, so it's going to be a little while until (technical difficulty) commercial grade in place. So, I don't expect rapid feedback that we can start to cascade the market. It's actually one of the things that make us kind of tempered in our outlook for the full year. Because we do know that the best growth, the drivers will be referral business, and testimonials and data [that's driven] by these early adopters. So we really are focusing on those critical first few, make sure they're having a successful experience, we're titrating (technical difficulty) beginning first quarter. And the marketing team would love to have those stories as quickly as possible, but I'm really (technical difficulty) setting expectations of Q2 before we're going to have a lot of stories to start sharing in the marketplace. And therefore, we will continue to work off our existing backlog, build the backlog. But we just need to be very tempered in our expectations. So, this is a catalyst on its own, very optimistic, but we need to make sure that we (technical difficulty) our expectations.

**Bill Quirk** - *Piper Jaffray - Analyst*

Okay, got it. Thanks, Chris.

**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

Okay.

**Operator**

Thank you. Our next question comes from Sung Ji Nam of Avondale, your line is open.

**Sung Ji Nam** - *Avondale Partners - Analyst*

Hi, thanks for taking the question. So Chris and Vikram, just curious, for your first quarter revenue guidance that's flattish sequentially, I think historically you -- Fluidigm for the first quarter revenues, you usually see a step down sequentially from the fourth quarter. So, I don't want to obviously read too much into it, but could you maybe give us more color in terms of what your underlying assumptions, and is this kind of an indication that there is improved sales pipeline that you're seeing?

**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

So first off, thanks for the question. My first reaction is Q3 was an incredibly disappointing quarter and represented a significant departure from where the trend line has been for the business. As I mentioned on the first call together in the beginning of the fourth quarter, the goal was to start to build credibility back one step at a time. And I think in Q4, Q4 was more from where we started, where we predicted we were going to finish, and how we started the way we finished. There was the natural kind of gives and takes of instrument placement, but we generally finished pretty close to how we modeled and thought we'd finish for the year. So, that was an important signal.

So, if we only have one quarter, one quarter data, so I think I'm really -- we're basing the judgment off of the funnel that we're bringing into the year. I think we're doing better in the building blocks, the methodologies that are required to turn the business around. But, I think as I said, it's going to be a transitional year for us, and I think we're just going to build confidence one quarter at a time. I wouldn't try to speculate with one quarter on the trend line.

**Sung Ji Nam** - *Avondale Partners - Analyst*

Okay, thank you. And then also, in terms of for the C1 platform, you're seeing increased competition, more competitors entering the market there. Could you maybe tell us kind of how you think about Fluidigm's competitive position for that platform, with the current applications you have over the next kind of the 12 to 18 months?

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

I'll start. So, I think subjectively, as Vikram touched on a couple different times, how the cell atlasing program plays out I think is going to be, is really a key variable that as we get more insights here in the first half of the year, I think will start giving us a much better understanding of our long-term competitiveness than the 12 and 18 month timeline. We've also seen very limited data outside of the [10 X] system. We've had very limited data on the performance of the system. But there's really pricing pressure, and then the (technical difficulty) of throughput, with regards to MicroRNA it is -- we're clearly -- it's a difficult competitive environment for us.

We're just now bringing the 100-cell chip, medium cell chip, online. I want to see how that helps us, and we also have the breadth of the market, and the breadth of applications, and we still have the largest breadth in the industry. So, I think those make it -- I mean, it's kind of a mixed bag of outlook for us. I think, we're not sure -- we know it's going to be scientifically very important in [bridge market]. We want to -- we have a value proposition to play. It's not the core -- I mean, it's a critical part of our business, but it's not the only major driver within our business. So, we're being very tempered in our expectation for where it's going to go, and we're going to take a -- I mean, we're going to be a key market (technical difficulty) in this. We want to be at a good seat at the table with regards to cell atlasing initiatives and how it's going to play out.

We've got a good install base we could do a better job of serving, and we have some new product offerings that we're titrating out into the market. So, I think it's very premature for us to speculate on where the market's going to go. Small market, but growing very rapidly, and we just need to make sure we're ready to [tack] as it expands and makes that transition, hopefully from academic and research settings into more applied settings. And that's, I think, the next leg that will really inform where this market's going to go, and which technologies and which form factors will be the most critical ones.

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**Sung Ji Nam** - *Avondale Partners - Analyst*

Okay, thank you so much.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

You're welcome.

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**Operator**

Thank you. Our next question is from Bryan Brokmeier of Cantor Fitzgerald, your line is open.

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**Bryan Brokmeier** - *Cantor Fitzgerald - Analyst*

Hopefully there's less of an echo this time. Could you talk a little more about the strategic priority of fostering innovation? You have a large portfolio of instruments, particularly following the introduction of the IMC. Over the course of 2017 are you primarily focused on the development of new IFCs, or could -- are you investing in R&D dollars on new instruments as well?

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

It's an excellent question, and I, on one hand I would love to share a lot of the details of our product pipeline. But, as unfortunately I've talked about in the past, we're not going to present forward-looking statements as it relates to the mix of investment. But you are correct, we've made some adjustments in expenses and OpEx, but we're (technical difficulty) a very significant portion of our operational expense in the form of innovation, inorganic innovation, that we're going to continue to drive. We did have a pretty heavy instrument-heavy set of expenditures in 2015 -- or 2016 as well as in 2015 -- one could speculate that we probably will shift some of those dollars to maximize the power of the install base we've already put in place. But I wouldn't say it's binary. We're going to have a more blended investment strategy, and I talked about three major factors. So I talked about what the revenue horizon is, what's the timeline in which the (technical difficulty) start doing our project, that innovation. When's the first dollar occur, and what's the intensity of that second, third, fourth dollar over a period of time. That's definitely one factor. We're trying to get a more blended return, not only swinging for the fences in big instrument launches that have a long multi-year development cycle and deferred gratification, to realizing the benefit of those.

So, you could imagine that we'll be looking both at the revenue intensity, we'll be looking some eye towards margin performance of those products. There is some (technical difficulty) to the margin performance of them. And the third is the technology risk related to it, and it's certainly easier [you could] imagine. There's less risk as it relates to building content, [menu] and software that sits on top of (technical difficulty) you've already done the hard science in inventing.

So, I think you could expect from us a very blended portfolio that will be over a period of time, start to give us [a little bit] more predictable return horizon on our investment.

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**Bryan Brokmeier** - *Cantor Fitzgerald - Analyst*

Okay, thanks a lot.

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**Chris Linthwaite** - *Fluidigm Corporation - President, CEO*

You're welcome.

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**Operator**

Thank you. I'm showing no further questions at this time. I'd like to turn the conference back to Ana Petrovic for any closing remarks.

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**Ana Petrovic** - *Fluidigm Corporation - Director of Corporate Development & IR*

We'd like to thank everyone for attending our call. A replay of this call will be available on the Investors section of our website. This concludes the call, and we look forward to our next update following the close of first quarter of 2017. Good afternoon, everyone.

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**Operator**

Thank you. Ladies and gentlemen, this does conclude today's conference. Thank you for your participation, and have a wonderful day. You may all disconnect.

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